إقـــرار

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Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation:

An Empirical study on the Information & Communication Technology (ICT) firms in Gaza Strip

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Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation:

An Empirical study on the Information & Communication Technology (ICT) firms in Gaza Strip

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Thesis Submitted in Partial Fulfillment of the Requirements for the Master Degree in Business Administration (**MBA**)

1435هـ/ 2014م

بسم الله الرحمن الرحيم

الجامعة الإسلامية – غزة
The Islamic University - Gaza

مكتب نائب الرئيس للبحث العلمي والدراسات العليا هاتف داخلي 1150

الرقم Ref ..... ج س غ/35/
التاريخ Date 2014/04/06

نتيجة الحكم على أطروحة ماجستير

بناءً على موافقة شئون البحث العلمي والدراسات العليا بالجامعة الإسلامية بغزة على تشكيل لجنة الحكم على أطروحة الباحث/ **محمود إبراهيم محمود سلمان** لنيل درجة الماجستير في **كلية *التجارة*/ قسم إدارة الأعمال** وموضوعها:

أثر التخطيط الاستراتيجي لأنظمة المعلومات على مستوى الإبداع الاستراتيجي
دراسة تطبيقية على شركات الاتصالات وتكنولوجيا المعلومات في قطاع غزة

وبعد المناقشة العلنية التي تمت اليوم الأحد 06 جمادى الآخر 1435 هـ، الموافق 2014/04/06م الساعة الواحدة والنصف ظهراً بمبنى القدس، اجتمعت لجنة الحكم على الأطروحة والمكونة من:

أ.د. ماجد محمد الفرا	مشرفًا ورئيساً	.....
د. رشدي عبد اللطيف وادي	مناقشاً داخلياً	.....
د. محمد إبراهيم المدهون	مناقشاً خارجياً	.....

وبعد المداولة أوصت اللجنة بمنح الباحث درجة الماجستير في **كلية *التجارة*/ قسم إدارة الأعمال.**

واللجنة إذ تمنحه هذه الدرجة فإنها توصيه بتقوى الله ولزوم طاعته وأن يسخر علمه في خدمة دينه ووطنه.

والله ولي التوفيق ،،،

مساعد نائب الرئيس للبحث العلمي و للدراسات العليا

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{يَرْفَعِ اللَّهُ الذَّينَ آمَنُوا مِنكُمْ وَالَّذِينَ أُوتُوا الْعِلْمَ دَرَجَاتٍ وَاللَّهُ بِمَا تَعْمَلُونَ خَبِير }

(سورة المجادلة، الآية11)

{قُلْ هَلْ يسَتَوِي الَّذِينَ يَعْلَمُونَ وَالَّذِينَ لَا يَعْلَمُونَ إِنَّمَا يَتَذَكَّرُ أُوْلُوا الْأَلْبَابِ }

(سورة الزمر، الآية9)

ABSTRACT

This study aims at examining the implications of Strategic Information Systems Planning (SISP) on the level of strategic innovation at the ICT firms in Gaza Strip. The study population consists of all managers at ICT companies in Gaza Strip. The researcher used the descriptive analytical method and utilized both primary and secondary sources for data collection. A structured questionnaire was distributed. Out of the (46) questionnaires distributed, (42) questionnaires were returned, forming a recovery percentage of 91.3%.

The research results show that ICT companies have a good level of SISP success factors which are (Top management support, Clear-cut corporate plan, Good user-IS relationships, Qualified personnel, Anticipating likely changes in IT, Clear, concise and formal planning procedures, Free communication and commitment to change); which means that ICT companies are ready to apply SISP. The research results also clarify that ICT companies are demonstrating some solid strategic innovation practices but there are areas of weakness. Moreover, the research results found a statistical significant relationship between the SISP success factors and the level of strategic innovation.

The researcher recommends that ICT companies should start a comprehensive SISP process which leads to strategic innovation. Top management should give extra support for the IS planning efforts. IT plans should be aligned with the strategic plan of the company. Also, more budgets should be assigned for R&D in the field of IT. Moreover, ICT companies need to determine specific goals and metrics for the Innovation process and they should go beyond traditional planning methods.

ملخص الدراسة

تهدف هذه الدراسة إلى التعرف على أثر التخطيط الاستراتيجي لأنظمة المعلومات على مستوى الإبداع الاستراتيجي في شركات الاتصالات وتكنولوجيا المعلومات في قطاع غزة. حيث يتكون مجتمع الدراسة من جميع المدراء في هذه الشركات والبالغ عددهم 46. وقد تم استخدام المنهج الوصفي التحليلي واعتُمد على عدد من المصادر الرئيسية والثانوية في جمع المعلومات، حيث مُثلت المصادر الأولية في استبانة صُممت خصيصا لهذه الدراسة. وتم استرداد 42 استبانة من أصل 46 تم توزيعها أي بنسبة استرداد 91.3%.

أظهرت الدراسة أن شركات الاتصالات وتكنولوجيا المعلومات لديها مستوى جيد من متطلبات نجاح عملية التخطيط الاستراتيجي لأنظمة الملعلومات: وهي (دعم الادارة العليا، خطة استراتيجية واضحة، علاقة جيدة بين المستخدم وبين انظمة المعلومات، كوادر مؤهلة، توقع التغيرات المحتملة في تكنولوجيا المعلومات، اجراءات تخطيط واضحة، حرية التواصل وثقافة التغيير)، مما يعني أن لدى هذه الشركات الجاهزية لتطبيق التخطيط الاستراتيجي لأنظمة المعلومات. وبينت الدراسة أن شركات الاتصالات وتكنولوجيا المعلومات لديها بعض الممارسات التي تساعد على تحقيق الإبداع، إلا أنه ما زالت هناك بعض نقاط الضعف. وعلاوة على ما سبق، فقد بينت الدراسة وجود علاقة ذات دلالة إحصائية بين متطلبات نجاح التخطيط الاستراتيجي لأنظمة المعلومات وبين مستوى الإبداع الاستراتيجي.

توصي الدراسة شركات الاتصالات وتكنولوجيا المعلومات بأن تبدأ بعملية شاملة للتخطيط الاستراتيجي لأنظمة المعلومات لديها؛ مما سيساعدها في تحقيق الإبداع الاستراتيجي. وبأن تقوم الإدارة العليا بزيادة الدعم لجهود تخطيط أنظمة المعلومات. وأن تكون خطط أنظمة المعلومات في الشركات متوائمة مع خططها الاستراتيجية. كما يتوجب على الشركات أن تقوم بتخصيص ميزانية مناسبة لجهود البحث والتطوير في مجال أنظمة المعلومات، وأن تحدد أهداف ومقاييس تتعلق بالإبداع وأن تتخذ نهجاً استراتيجياً استكشافياً يتجاوز أساليب التخطيط التقليدية.

ACKNOWLEDGEMENTS

By the Name of Allah, the Most Gracious and the Most Merciful

First, I would like to express my appreciation to Allah, the Most Gracious and the Most Merciful, and the Most Compassionate who has granted me the ability and willing to start and complete this dissertation.

My most profound thankfulness goes to my supervisor Prof. Dr. Majid El-Farra for his constant support, guidance, and knowledge as well as his unending patience. I gratefully and deeply thank him for his support and cooperation as being equipped to provide his best help. Without such kind of support and supervision the emergence of this dissertation would have been next to impossible.

My sincere appreciation to Dr. Rushdy Wady and Dr. Mohammed El-Madhoon who accepted to examine the research study. My thanks also go to all the lecturers who helped me to collect my data during their classes. ”May Allah bless all of them”.

Special thanks to those noble people who helped me during data collection stage and validation stage. My demonstrative appreciations are to all my friends, my job colleagues in Jawwal Company and everyone who put the hand either directly or indirectly to complete this dissertation.

Last and least, I wish to thank my entire dearest family members, especially my parents, my lovely brothers and sisters. The deepest appreciation is expressed to my wife, for her silent sacrifice and endless support throughout this long journey as a graduate student.

DEDICATION

TO THE SYMBOL OF TENDERNESS, LOVE AND SACRIFICE. . .

My Mother

TO THE SOURCE OF LOVE, GIVING AND SUPPORT. . .

My Father

TO MY LOVE, AND LIFE FELLOW

My Wife

TO THE LIGHT OF MY EYES. . .

MY CHILDREN (IBRAHIM & LANA)

TO MY WONDERFUL BROTHERS AND SISTERS …

TO MY DEAR FRIENDS…

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LIST OF ABBREVIATIONS

IS	Information Systems
SIS	Strategic Information Systems
SISP	Strategic Information Systems Planning
ICT	Information & Communication Technology
IT	Information Technology
NGOs	Non-Governmental Organizations
MIS	Management Information Systems
SMEs	Small and Medium-Sized Enterprises
KSFs	Key Success Factors
CSFs	Critical Success Factors
CIO	Chief Information Officer
CFO	Chief Financial Officer
CEO	Chief Executive Officers
CASE	Computer-Aided Software Engineering
BSP	Business Systems Planning
SSP	Strategic Systems Planning
SWOT	Strength, Weaknesses, Opportunities, and Threats
SI	Strategic Innovation
PITA	Palestinian IT Association

CHAPTER ONE

INTRODUCTION

This chapter consists of the following sections:

1.1 Preface

For a long time, relationship between information system functions and corporate strategy was not of much interest to Top Management of firms. Information Systems were thought to be synonymous with corporate data processing and treated as some back-room operation in support of day-to-day mundane tasks (Rockart, 1979). In the 80's and 90's, however, there has been a growing realization of the need to make information systems of strategic importance to an organization. Consequently, strategic information systems planning (SISP) is a critical issue. In many industry surveys, improved SISP is often mentioned as the most serious challenge facing IS managers (Pavri and Ang, 1995, Beath and Orlikowski, 1994; Martin, 1993; Porter and Miller, 1985).

Strategic information systems planning was previously the work of technology and systems professionals. It has now changed to be a collaborative planning challenge of parties including top managers, business unit managers, technology and systems professionals, and sometimes external stakeholders such as customers and alliance partners (Ruohonen, 1996).

Thus, planning becomes a partnership among those with technical skills, the information systems group, and the general and functional managers of the organization. The planning process requires discussion, clarification, negotiation and the achievement of a mutual understanding (Piccoli, 2008; McNurlin, et al., 2009).

Technology and information systems play an ever-increasing role in today's organizational environment. Because of the rapidly changing nature of technology developments, it is sometimes difficult to employ standard planning processes. The primary guideline for information systems planning is that the planning process must be designed and conducted in alignment with organizational and business plans. Most organizations now agree that IS is an important strategic organizational resource that can provide strategic advantage and boost business performance (Brown, 2004).

According to Kuhn & Marsick (2005), Today's competitive environment presents difficult challenges for executives in many mature organizations: global

competition, industry convergence, disruptive technologies, new entrants, evolving customer needs, and the rapid commoditization of products and services. Facing ongoing growth and earnings pressures, executive sponsors of senior-level action learning programs are increasingly asking participants to ‘think differently’ about the business, to look at markets expansively, and to conceptualize new sources of customer value that will catalyze new businesses and revenue streams. In the language of the new competitive playing field, they are asking for strategic innovation.

Then, SISP and strategic innovation are important issues for the companies. For this reason, the researcher needs to examine the implications of SISP on strategic innovation in Information and Communication Technology (ICT) firms in Gaza Strip. And according to PITA (2013), The ICT sector has had a significant influence on the development of Palestine’s infrastructure, quality of life, state of education, recognition of its rich, cultural history, and the emergence of its startup economy. Palestinian ICT companies cover wide spectrum of the ICT market including hardware distributors, software development firms, office automation vendors, and internet service providers, and telecommunications companies, ICT consulting and training companies.

1.2 Problem Statement

The subject of Strategic Information Systems Planning is becoming an important research topic in the last years, because of the increasing development of the sophisticated technology, which leads to more competition between firms. Companies now are giving more interest to information systems at the level of daily operations. However, it is not very common that companies in Gaza Strip deploy a planning process for Information Systems Strategically. So, this research is going to focus on the Strategic Information Systems Planning and the implications of this on the Strategic Innovation in order to courage firms to go ahead in applying such planning approach.

Thus the problem of the study is summarized as follows:

"What are the implications of Strategic Information Systems Planning on the level of Strategic Innovation?"

1.3 Variables of the study

The study included the following variables:

Dependent variable: level of Strategic Innovation in ICT firms in Gaza Strip.

This variable will be measured through a predefined assessment model by a consultation company named InnovationPoint. This model contains seven dimensions of strategic innovation. (Derrick & Soren, 2007). These dimensions are:

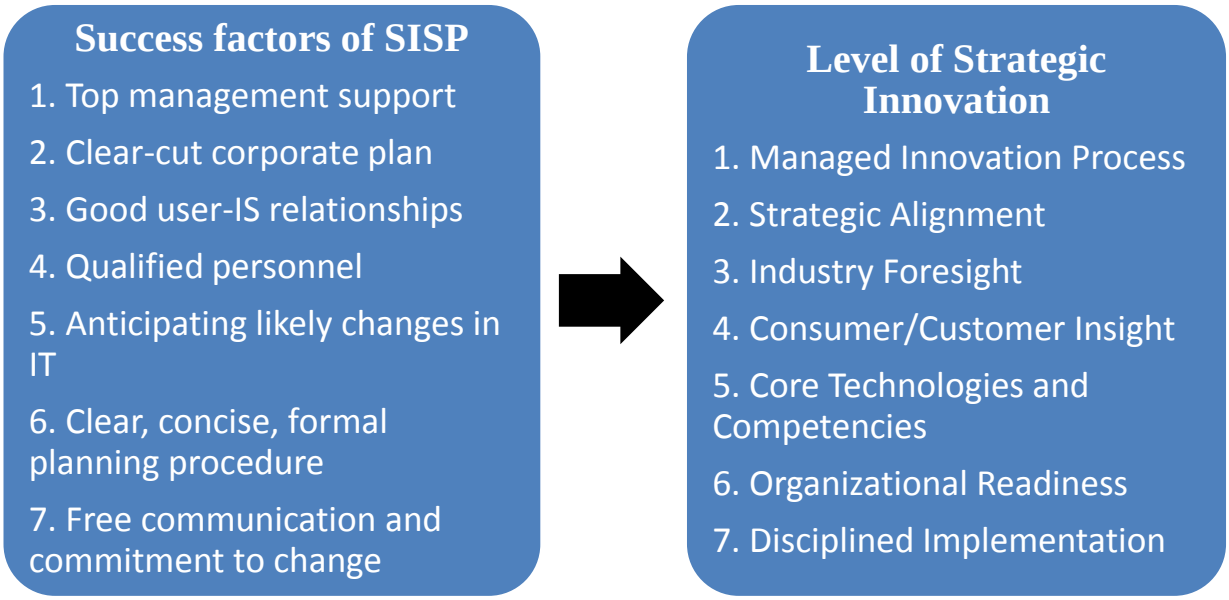
1. Managed Innovation Process
2. Strategic Alignment
3. Industry Foresight
4. Consumer/Customer Insight
5. Core Technologies and Competencies
6. Organizational Readiness
7. Disciplined Implementation

Independent variable: Requirements of the success of SISP, where these factors are presented by the study of Ang & Teo (1997) and existed in many previous studies. These success factors include:

1. Getting top management support for the planning efforts
2. Having a clear-cut corporate plan to guide IS planning effort
3. Good user-IS relationships
4. Being able to obtain sufficiently qualified personnel to do a proper job
5. Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process
6. Having a clear, concise, formal planning procedure
7. Having free communication and commitment to change throughout the organization

Figure (1.1) is a diagram which shows the relationship between the dependent variable and the independent one.

Figure (1.1): Relationship between dependent and independent variables



1.4 Hypotheses of the study

The study includes the following assumptions:

1) There is a statistical relationship at a significant level 0.05 between the requirements of the success of SISP and the level of strategic innovation.

Which is divided into the following sub-hypotheses:

1.1 There is a statistical significant relationship at level 0.05 between Getting top management support for the IS planning efforts, and between the level of strategic innovation.

1.2 There is a statistical significant relationship at level 0.05 between Good user-IS relationships, and between the level of strategic innovation.

1.3 There is a statistical significant relationship at level 0.05 between Having a clear-cut corporate plan to guide IS planning effort and the level of strategic innovation.

1.4 There is a statistical significant relationship at level 0.05 between Being able to obtain sufficiently qualified personnel to do a proper job and the level of strategic innovation.

1.5 There is a statistical significant relationship at level 0.05 between Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process, and the level of strategic innovation.

1.6 There is a statistical significant relationship at level 0.05 between Having a clear, concise, formal planning procedure, and the level of strategic innovation.

1.7 There is a statistical significant relationship at level 0.05 between Having free communication and commitment to change throughout the organization and the level of strategic innovation.

2) There is a statistical significant difference among the respondents toward the Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation due to:

a) Company Traits (Company Age, Number of employees)

b) Personal Traits (Sex, Age, Education, Specialization, …)

1.5 Objectives of the study

This study aims to achieve the following:

1. Determining the implications of Strategic Information Systems Planning (SISP) on the level of strategic innovation.
2. Identifying obstacles and problems that impact negatively on implementation of SISP in ICT firms.
3. Determining the factors affecting the level of strategic innovation in ICT firms.
4. Recognizing the level of strategic innovation in ICT firms.
5. Providing recommendations to managers and researchers based on the conclusions drawn from this study.

1.6 Importance of the study

This topic gains its importance from the globally increasingly strategic business weight and attention paid to Strategic Information Systems Planning, which allows business to be more aligned with new technology. Also, Today's competitive environment presents difficult challenges for organizations, where these organizations are in a real need for strategic innovation.

This study highlights the importance of strategic information systems planning and its role in achieving the strategic innovation and looks for better utilization and

optimal use of information systems especially at the strategic level. This study provides organizations with the processes to guide effective investment in Information Systems to achieve competitive advantage and helps companies to determine their level of strategic innovation and how to increase this level.

This study is a way to develop the skills of the researcher and the research skills and to improve his job career. The research also can be a reference for future researchers concerned in this topic.

It is the first study at the level of Palestine that links between the success factors of SISP and the level of strategic innovation.

1.7 Previous Studies

1.7.1 Palestinian Studies

1) **(Abu Karim, 2013): "Relationship of Management Information Systems to Improving Managerial Performance; A field study on Non-governmental Organizations in Gaza Strip"**

This study aimed to explore the relationship between the Management Information Systems (MIS) and the improvement of the management performance in non-governmental organizations (NGOs), in the Gaza Strip.

The methodology was based on a questionnaire wher 172 questionnaires were distributed to the managers of these organizations, 152 questionnaires were re-collected, which means 88.3% response rate.

The results of the study show that equipment is considered as the most management systems that improves the management performance. Followed, in order, by, the users of information systems and programming. While the least effective factors on the information system were the professional technicians and data base. Furthermore, results show that management committees supervise and prioritize polices for these organizations. In addition, Information Technology (IT) section is responsible for saving data. Adding to that, it shows that there is a relation between the management information systems and the management performance. As well as,

there are statistical differences between the MIS and the management performance refers to the variables of period of experience and the academic qualifications.

The recommendations of the study to NGOs, in Gaza Strip, to improve its performance, were: ensuring the importance of having IT sections, employing specialists, and share in the planning the NGOs polices. Furthermore, there is a need to enhance the infrastructure of the IT, especially, the MIS. Moreover, ensure that NGOs are up-to-date regarding IT, and to train the employees how to use these up-dated technologies. In addition, urges NGOs to use its management policies that guides the MIS towards the improvement of its performance that lead to more organizational efficiency and effectiveness.

2) **(Ismael, 2011): "The characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle management in banks operating in Gaza Strip"**

This study aims to identify the characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle departments of commercial banks operating in the Gaza Strip.

The methodology of the study was based on analytical descriptive method using a questionnaire which was distributed to banks operating in the Gaza Strip. The study sample consisted of (67) questionnaires for all the banks in Gaza Strip.

The study found that the banks operating in the Gaza Strip apply information systems and technology in all units and divisions. Also the results showed that the use of information systems increases the efficiency of coordination between the branches and increases the revenues of banks and reduces the cost of banking services. The study proved that the information systems has major and important role in achieving competitive advantage for banks operating in the Gaza Strip.

The study recommended the banks to increase the awareness of big challenges and continuous competition that they are facing. Also, the study recommended responsible people in the banking sector in the Gaza Strip to increase attention to information systems and information technology and work to establish a specialized department for information systems and to work to raise the efficiency of information systems and components of information systems (hardware, software, telecommunications,

databases, personnel, procedures) and configuring them depending on the technological innovations.

3) **(EL-Ghorra, 2011); "The Influence of Knowledge Sharing on the Level of Innovation; A Field Study for Managers at the Palestinian Ministries in the Gaza Strip"**

The aim of this study is to investigate the influence of knowledge sharing on the level of innovation at the Palestinian Ministries in the Gaza Strip.

The study used the descriptive analytical method and utilized both primary and secondary sources. A structured questionnaire was distributed to the managers in the Palestinian ministries in the Gaza Strip. Out of the (350) questionnaires distributed, (270) questionnaires were returned.

The study revealed that the Palestinian Ministries in the Gaza Strip enjoy a satisfactory level of innovation. But these Ministries don't have a fair and efficient reward system to encourage innovation and knowledge sharing practices. Organizational structure does not encourage innovation and promotion of work. The stock of knowledge at the Palestinian ministries is available and accessible. Managers at the Palestinian ministries seem satisfied with the practices of knowledge sharing. Also, the study found that there is a significant relationship between CITs and the level of innovation.

The study recommended that the ministries of the Gaza strip need to build an environment and culture to support knowledge sharing behaviour. Organizational structural changes need to be studied in addition to incentives and rewards system. Establishing knowledge management system to support the processes of knowledge creation, storage, sharing and application is recommended.

4) **(El-Kourd, 2007): "Information Technology Investments Evaluation Practices In The Banking Sector In Palestine (Information Technology Management Perspective)"**

This study aims to investigate the IT evaluation practices in the banking industry in Palestine; including the extent to which formal procedures of evaluation exist

within banks, the problems inherent in evaluating IT investments, and the techniques used by banks to evaluate their IT investments.

This study has been conducted as a quantitative one based on a survey inquiry. The target to the survey was all IT managers of the twenty one banks operate in Gaza Strip and the West bank. Nineteen of the distributed questionnaires were retrieved and analyzed.

The study found that the banking sector in Palestine has some sort of formal procedures for evaluating IT investment, and they use a variety of IT investment evaluation techniques. However, closer examination of the formal procedures revealed that these procedures are not precise and detailed ones. The results also showed that there was significant positive correlation between the presence of a written IT strategy and the presence of formal IT investment evaluation procedures, there was a significant positive relation between the presence of formal IT investment evaluation procedures and the success of the implemented IT investments, and there was a significant positive relation between carrying out IT investments evaluation and the success of implemented IT investment. Anyhow, the result did not show a significant positive correlation between the presence of formal IT investment evaluation instructions and carrying out IT investments evaluation.

The study recommended that sufficient time, effort, and support from top management should be devoted to IT investment evaluations because it is the most important feeding mechanism, and banks should keep developing and searching for more comprehensive methods that consider broader economic and strategic impacts of their IT investments.

1.7.2 Arabic Studies

5) **(Al-Jazi, 2011): " The impact of strategic information systems effectiveness on the quality of government services: An applied Study on the Department of Drivers and vehicles Licensing in Jordan Public Security Directorate"**

The study aimed at identifying the impact of strategic information systems effectiveness on the quality of government services in the Department of Licensing in Jordan Public Security Directorate.

The methodology of the study was based on a questionnaire. The study sample was 650 employees from the Licensing Department and its branches. SPSS.16 was used to analyze data.

The study found that there were high perceptions of respondents regarding the impact of strategic information systems effectiveness, in addition to the high level of their perceptions regarding the level of the quality of government services. Also, the study found that there was significant impact of the dimensions of strategic information systems on the quality of government presented by Licensing Department in Jordan Public Security.

The study recommends that a continuous focus on strategic information which were used by the licensing Department is needed. Also, the study recommends establishing a database to work inside the department while its necessary to keep channels of communication opened in order to show how successful these systems are in providing the best government services for them.

6) **(Issa-Salwe, Sharif, Ahmed, 2011): "Strategic Information Systems Planning as the Centre of Information Systems Strategies"**

The study aimed at examining the research on this ever-important topic (SISP) and focusing on the importance of SISP to IS strategies.

The study found that Success can be achieved when an organization can achieve balance between IS and its organizational planning, SISP is confirmed as the heart of all IS planning contribution to the competitiveness of the organization.

The study recommends that the strategic information planning process should be a complete plan to accommodate the competence of the organizational competitiveness. Also, it is important to relate strategic information systems planning with all other strategic attributes of the organization for survival and prosperity.

7) **(Albadri, Abdallah, 2010) "Strategic Information Systems Planning in UAE Organization: SISP approaches classification"**

The study aims to explore SISP approaches in UAE organizations and their potential impacts on IS&T investment. The study builds on the findings of a case

study that examined the approach of a major UAE Utility and which was presented in another conference.

The methodology of the study was based on a survey and simple model to characterize, classify and examine the SISP approaches of 17 UAE organizations. Four typical cases which were deemed representative of the main SISP categories were investigated further for improved understanding of specific strengths and weaknesses and in order to appraise the appropriateness and effectiveness of each category considering the business environment and priorities specifics.

The study concluded with an emphasis of the importance of SISP to UAE organizations' ability to achieve their bottom lines. The study also highlights the potential value of the proposed model to help UAE organizations understand the need to adjust their SISP approaches to ensure suitable and effective investment in IS&T that ensures alignment to business strategy and focus on realizing business objectives and goals.

8) (Al-Shalabi, Bani-Hamdan, 2009): "Effect of IT on the Organizational Innovation- Case Study on the Electricity Central Generation company-Jordan"

This study aimed to identify the impact of the use of information technology on the Organizational Innovation in the Central Electricity Generation Company in Jordan.

The methodology of the study was based on a questionnaire, which was distributed to 46 officers from different managerial levels.

The study had a number of results, including:

- A positive, significant statistical relationship between IT and Organizational Innovation.
- A significant statistical relationship between IT physical components and Organizational Innovation.
- A significant statistical relationship between IT Human Resources and Organizational Innovation.

The study had a set of recommendations, including:

- Work on forming a team for each department to resolve the problems facing the company, and to put forward some topics and suggestions to be discussed through the method of brainstorming and problem solving.
- Training sessions for all employees at various administrative levels to increase their skills and abilities to use and deal with the technology available in the company.

9) (Al-Hayali, Al-Murad, 2009) "Indicators of the success of MIS and its role in innovation and excellence, exploratory study in government and private banks in the city of Mosul"

This study aimed to build a theoretical framework for the impact of the Indicators of the success of the management information system and their role in innovation in government and private banks in the city of Mosul, Iraq.

The methodology of this study was based on a survey, which was distributed on managers in the banks.

The study found that the indicators of the system use and users conviction are important indicators in the measurement of the success of the Management Information System. Moreover, the study found that there is a statistical relationship between indicators of the success of the MIS (system use and users conviction) and the innovation and excellence.

The study recommends that organizations should measure the level of success for their MIS. Also, to develop the MIS concepts in the banks by training the managers at various levels.

10) (Ramadan, Taha, and Al-Hudaif, 2007): " Information Technology Strategic Planning, A Case Study: Ministry of Transport in the Kingdom of Saudi Arabia "

The study aimed at presenting a practical methodology for developing information technology (IT) strategic plans that were designed and implemented successfully in the context of the Saudi Arabian Ministry of Transport IT strategic planning project. This was a project that aimed to link the IT future directions in the Ministry and its needs as decided by its future business development plans.

The methodology of the study depends on analyzing and documenting strategic business directions, documenting the current state of IT and determining the existing gap between this current state of the IT sector and its envisioned future directions.

The output of the study was a set of IT policies including top management support of changing their IT systems to be aligned with their strategies and goals, and preparing a detailed action plan for the development of their IT systems and supporting the IT center by Human and Budget resources. These IT policies were arranged based on their implementation priority values which were calculated using a special mathematical model.

11) **(Tashtoosh, 2007): "The role of information systems capabilities in promoting strategies for competitive advantage in the Jordanian industrial organizations"**

The study aimed to examine the role of information systems which includes (human resource, software, and equipment) in the Jordanian industrial organizations in achieving competitive advantage which includes strategic differentiation and cost leadership strategy.

The methodology of the study was based on a survey of the Jordanian industrial organizations listed in the Amman Financial Market. 20 organizations were taken as a sample for the study.

The study found that there is a positive relationship between information systems (human resource, software, equipment) and the competitive advantage (strategic differentiation, cost leadership strategy). Also the study found that industrial organizations focus on the use of cost leadership strategy to strengthen the competitive advantage more than using strategic differentiation.

The study recommends that industrial organizations should use new training programs for their human resources to achieve strategic differentiation. And there should be a mechanism to assess the relationship between the system and human resources. Also, purchase departments in industrial organizations should coordinate with production and engineering departments in choosing and purchasing the right equipment.

12) (Zo'bi, 2003): "Impact of strategic information systems in achieving competitive advantage: Case Study on Jordanian banks listed on the Amman Stock Exchange"

The study aims at explaining the impact of information systems strategy in achieving the factors of the competitive leadership (growth of market share, growth in market value of the shares, and the growth of return on investment), by building and development of competitive advantage (excellence, leadership cost, innovation, growth, and alliances).

The methodology of the study was based on a survey of the managers (General Managers, Deputy General Managers, and General Manager Assistants) in the Jordanian banks listed in the Amman Financial Market.75 managers were taken as the sample of the study.

The study found that there is an impact relationship of strategic information systems on the factors of the competitive development through building and development of competitive advantages, whether this effect was "direct" or indirect.

The study recommends that banking organizations should pay attention to all environment variables through internal development to suit the evolution in the competitive business environment, and this is done through the collection of data around and diagnoses the internal strengths and weaknesses. Also, the study recommends that banking organizations should activate the role of information systems in strategic planning to guide and use the output of the information system in the right direction.

1.7.3 Foreign Studies

13) (Bongani, 2013) "Performance Implications of Information Systems Strategy Planning within Zimbabwean Firms: a Context Approach"

The study sought to examine the interrelationships between four domains of context (the external environment, outside of the organization's control; the internal organization context; the internal Information Systems context, factors that characterize the internal Information Systems/Information Technology; and the

managerial context, attitudes, belief systems and experience of managers responsible for making choices) and considered their influence on Information Systems Strategic Planning. The study also examined the corresponding impact of planning on business performance.

The methodology of the study was accomplished by collecting data from 113 Zimbabwean companies.

The results of the study revealed that the internal Information Systems context mediated the effects of environmental and organizational level variables on Information Systems Strategic Planning practice. The results further showed that Information Systems planning intensity and degree of integration with business planning was strongly influenced by managerial planning expertise, and had positive effects on business management's commitment to Information Systems as well as on Information Systems contribution to business overall performance.

14) **(Raja, Rosli, Alexei, 2013): "The Determinants of Strategic Information System Planning (SISP) Success: A Proposed Framework for Small and Medium-Sized Enterprises (SMEs)"**

This study proposes to examine the effect of top management commitment and users participation in IS planning activities in ensuring SISP success in SMEs.

The study methodology was based on a mail survey technique approach in collecting empirical evidences from the sample firms which are 1565 Malaysian SMEs.

Upon completing the empirical data collection, this study is expected to offer a model that assesses the effect of user participation and top management commitment to strategic IS planning success of the firms.

The findings are of relevance for firm's top management in developing more efficient and effective strategic IS planning.

15) **(Wilkin, Cerpa, 2012): " Strategic Information Systems Planning: An Empirical Evaluation of Its Dimensions"**

The study aims to investigate the practice and effectiveness of Strategic Information Systems Planning (SISP) as a function of strategic management in 29

large Australian organizations. Also, the study aims to review these results through a theoretical lens established by Segars et al. (1998) who identified six dimensions (comprehensiveness, formalization, focus, flow, participation and consistency) that provide a structured approach to reviewing the SISP process.

The study results show that SISP was widely used in these 29 organizations in aspects such as planning associated with strategic IS investment and application, and whilst the theoretical review generally supported the literature, some amendments are required to the participation and focus dimensions suggested by Segars et al. (1998).

16) (Yang, Tanner, Kuzic, 2011), "Enablers and Inhibitors of SISP: A Case Study of a Korean Large Corporation"

The study aims at identifying the enablers (top management support, business strategy available, good IS management,…) and inhibitors (limited planner knowledge, lack of top management support, poor level of communication,…) of developing a successful SISP process and the interrelation between these inhibitors and enablers.

The methodology of the study is based on a pilot case study that investigated enablers and inhibitors of SISP in a large Korean corporation.

The study found that there are close relationships between enablers and inhibitors and benefits of SISP.

The study recommends future researchers to validate these findings in other large Korean corporations.

17) (Khani, Nor, Hakimpoor, Bahrami, Salavati, 2011) "Is/It Capability And Strategic Information System Planning (SISP) Success"

This study provides a model for IT capability and strategic information system planning success, by considering environmental and organizational factors that may influence this relationship in a contingency model.

The study was based on a review of existing IT capability and SISP literature to identify the opportunities in building successful SISP. A model is developed by hypothesizing IT capability as independent variable leads to SISP success as dependent variable; in which organizational & environmental influences are

considered as moderating variables. The control variables are firm size, firm structure, and industry type.

The study proposes a model to conceptualize the relationship between IT capabilities and SISP success and contingency factors moderating that relationship.

This study explains the ways of exploiting IT capabilities as specialized and integrated knowledge of the firm in IT area to create a more successful SISP.

18) (Bechor, Neumann, Zviran, Glezer, 2010): "A contingency model for estimating success of strategic information systems planning"

The study aimed at investigating the success of SISP as a function of its key success factors (KSFs) in different contexts and SISP approaches.

The study used a framework that integrated all of the SISP components and provided a new perspective on how the constructs are instrumental to produce SISP success.

The methodology was based on a survey on 172 American CIOs.

The study found that the combination of SISP context and approach was found to have a moderating influence on the basic relationship between SISP KSFs and its success, the best predictor for the long-term success of the SISP process was apparently based on the three-way interactions between SISP's KSFs, its approach and its context. Also, the study found that specific combinations of SISP approach and SISP context were found to decrease or increase the size of the "planning paradox" (the inconsistency in the behavior of the "basic relationship" between the three).

19) (Hovelja, Rozanec, Rupnik, 2010): " Measuring The Success Of The Strategic Information Systems Planning In Enterprises In Slovenia"

The study aimed at developing a new approach for the measurement of SISP success that attempts to combine key predictors of SISP success from the fields of strategic information systems planning and strategic business planning in a way that would be as practical as possible for everyday use in enterprises.

The methodology of the study used literature review to identify 14 SISP predictors. Also a questionnaire was distributed on 914 Slovenian companies, only 94 questionnaires were received.

The study found that the main SISP success predictors are: top management commitment and involvement, quality of strategic business planning, the role of IT in strategic business planning, the quality of work of the project teams, the design and implementation of organizational changes, the design and implementation of technical changes, key user involvement, end user training for IT use, and the control and evaluation of the selection, implementation and use of IT.

The study recommends that the enterprises should better manage five of SISP success predictors. These five predictors are the ones that focus on the creation of competitive advantages through the strategic use of IT.

20) (Pita, Cheong, Corbitt, 2010), "Strategic Information Systems Planning (SISP): an Empirical Evaluation of adoption of Formal approaches to SISP in Australian organizations"

The study examines the use of formal Strategic Information Systems Planning (SISP) approaches and methodologies in Australia. The study analyzes the relationships between SISP success, SISP objectives, company size/type and SISP approaches and methodologies.

The study found that the most popular methodologies are not the most successful. Emerging methodologies, such as Fuzzy Cognitive Maps and Information Engineering, could be considered for improving the success of SISP. The study also found that a combination of SISP approaches is more successful than the implementation of any one approach.

The study recommends that SISP theory needs a new way of thinking to stay relevant for practice.

21) (Hemmatfar, Salehi, Bayat, 2010) "Competitive Advantages and Strategic Information Systems"

This study aimed to review the literature of information systems and discuss the concepts of information system as a strategic tool, by considering the opinion of some of ISs scientists and reviewing the literature of strategic ISs, competitive advantage and porter's model for competitive situations.

The study found that one of the important factors in new challengeable business environment is emphasis on strategic ISs and this is no ended research topic. Researchers believe that for achieving successfulness, organizations must establish all aspects of their planning structures based on strategic planning.

22) (Basahel, Irani, 2009): "Evaluation of Strategic Information Systems Planning (SISP) techniques: driver perspective"

The purpose of the study was to evaluate SISP techniques through information system (IS) strategic drivers because these techniques can be vital contributors in the IS strategy (ISS) designing process. And to develop a categorization of the techniques of ISS planning.

Methodology was through literature reviews and a case study for X international airlines.

The study found that, the planning team needs to identify how it can cluster an organization's ISS drivers. This may be achieved by analyzing the drivers that can have an effect on IS for the organization, which may support categorization of drivers against techniques being classified to understand which are needed to fit specific drivers

The study recommends that this classification can benefit evaluation of the ISS planning processes to support decision-makers through the planning process.

23) (Teubner¸ Mocker, 2008): "A Literature Overview on Strategic Information System Planning"

The study conducted a comprehensive literature review of German and Anglo-American information systems journals and the purpose was to understand more about SISP from international research and to identify fields that are in urgent need for closer academic investigation.

The study found that there is a considerable amount of research conducted in the field of SISP, and after taking a sub-sample of the literature; statistics showed that most attention has been paid to the competitive use of IT while The IS strategy in contrast has only been of limited interest. Also, the study found that German speaking

researchers have devoted relatively few efforts to SISP in comparison to their Anglo-American colleagues.

24) (Teubner, 2007) "Strategic information systems planning: A case study from the financial services industry"

The study aims to investigate the gap between SISP research and practice, by conducting an in depth case study on SISP to investigate this gap.

The study was carried out in a German financial services company (FSC) over a period of five months. During this time, the enterprise situation and the information system (IS) practices situation of FSC were studied with respect to the SISP approach in place.

The study found that practitioners largely ignore academic literature and do not use it in support of their SISP endeavors. The study examined two possible explanations for the gap: firstly a lacking transfer of academic knowledge to practice, and secondly deficiencies in the academic knowledge base itself. In fact, researcher observations highlight a disconnect between academic discussion and practical conduct. However, he found that the ignorance of academic literature on SISP is not primarily caused by a constrained knowledge transfer.

25) (Shirazi, Soroor, 2007): "An intelligent agent-based architecture for strategic information system applications"

The study aims at developing a comprehensive framework for implementation of a strategic information system to be put into practice by a team of professionals.

The methodology of the study was by investigating the fundamental concepts of strategic information systems and intelligent agent technology, and then it continues on the specification of the characteristics and implementation issues of a typical SIS. Afterwards, the study made use of these concepts and integrate them into a state-of-the-art, intelligent architecture for strategic information systems, called intelligent agent-based SIS.

The study came up with a graphical model of the agent-based architecture for SIS includes many conceptual and practical details.

The study recommends that the new method proposed for designing SIS based on intelligent agents, requires further investigations by corresponding experts from different fields of science.

26) (Warr, 2005) "A Study of the Relationships of Strategic IS Planning (SISP) Approaches, Objectives and Context with SISP Success in UK Organizations"

The study aimed to develop the SISP research agenda by examining how the SISP approach used, the SISP objectives of organizations and key dimensions of the SISP context relate together with SISP success.

The methodology started with a conceptual model which was developed based on SISP theory, strategy process theory and organizational theory. The proposed model was tested with a mail survey of the IT directors (or equivalent) of 70 UK organizations and structural equation modeling was used to analyze the data.

The study results support an influence on SISP success from both SISP approach and SISP objectives. Within SISP context only the IS maturity of the organization and the orientation of its business strategy were found to strongly influence SISP success. No support was found for the influence of external environment, organizational structure or IS function structure on SISP success. SISP objectives were also found to influence SISP success indirectly through SISP approach. Similarly IS maturity and strategy orientation influence SISP success indirectly through SISP approach.

27) (Spremic, Strugar, 2002) "Strategic IS planning practise in Croatia - Organizational and managerial challenges"

This study aimed to identify the SISP practices in Croatia and to compare these findings with prior studies in Slovenia and Singapore.

The methodology of the study was based on a questionnaire which was sent to 150 IS executives in Croatian companies. The survey resulted in 106 responses representing a strong response rate of 71%.

The results of the study are compared with similar surveys in Slovenia and Singapore. In Croatia, companies' IT is still considered just a tool for automation of present business processes, completely neglecting the challenging role of IT as a

competitive resource in the market place. The research findings indicate that the source of this problem comes from lack of knowledge and interest in IT from top management structures of Croatian corporations.

The study recommends that significant efforts must be taken by management to develop a new hybrid manager profile. Certainly, this type of manager must get additional knowledge in strategic business planning and IT management.

28) (Kearns, Grover, 2000) "Top Management Support of SISP: Creating Competitive Advantage with Information Technology"

The study aimed to find the impact of top management's support for the IS function on the success of SISP, by studying the use of information technology in the electric utility industry which is a deregulated, more competitive environment.

The methodology of this study suggests that a strong relationship is hypothesized between top management support for SISP and the strategic use of IS. The relationship is expected to be stronger among electrics. A survey was conducted for CIOs and other members of top management from 161 companies, including 21 responses from electric utilities.

The result reveals that top management's support of SISP does influence the use of IS for competitive advantage and supports study hypotheses.

29) (King, Teo, 2000): "Assessing the impact of proactive versus reactive modes of strategic information systems planning"

This study examines two modes of Information Systems Planning ISP (reactive and proactive) as defined by the extent of Business Planning –ISP integration.

Questionnaires were sent to 600 firms (addressed to IS executives and business planners) and 157 usable matched responses were received (26.2% response rate).

The results determined that firms operating in a proactive mode had significantly higher status for IS executive, significantly greater perceived IS contributions to organizational performance and significantly fewer ISP problems than did those operating in a reactive planning mode.

The study recommends that IS plans should be as comprehensive and complete as possible; and involvement of top managers and users is important for greater perceived benefits of ISP, are made based on the results.

30) (Doherty, Marples, Suhaimi, 1999): "The relative success of alternative approaches to strategic information systems planning: an empirical analysis"

The study suggests that the 'SISP approach', a combination of method, process and implementation, is the most complete way of describing SISP activity.

The methodology of the study was based on questionnaire responses from 267 IT Directors, which led to four distinct approaches to SISP that have been derived using cluster analysis. And a comparison of these four approaches with five approaches of Earl, M.J., 1993.

The study found by analysis of the relationship between SISP approach and SISP success that the 'organizational approach' is significantly more successful than the other three approaches.

31) (Ang, Teo, 1997) " CSFs and sources of assistance and expertise in strategic IS planning: a Singapore perspective"

The study aims to enhance existing knowledge on how strategic IS planning should be effectively managed and to identify the main Critical Success Factors (CSFs) of SISP.

The methodology of the study is based on a survey on IS planning conducted in 1996 by the National University of Singapore.

The study identified the main CSFs (Top management support; Clear-cut corporate plan; Good user-IS relationships; Qualified personnel; Anticipating likely changes in IT; Clear, concise and formal planning procedures; Free communication and commitment to change,…) and then ranked and ordered the CSFs in strategic IS planning in the Singapore context. The study also examined the sources of assistance and expertise that companies undertaking IS planning in Singapore can tap.

32) (Pant, Hsu, 1995): "Strategic Information Systems Planning: A Review"

The study aimed at reviewing the literature for commonly used or representative information planning methodologies to answer the question of: "has the paradigm of strategic planning changed sufficiently to support the new role of information systems and technology?".

The study reviewed six methodologies and found that all of these methodologies tend to regard planning as a separate stage which does not connect structurally and directly to the information systems development.

The study recommends that there is a need for a new approach that achieves the integration of planning with development and management through enterprise information resources – which capture and characterize the enterprise – will shorten the response cycle and even allow for economic evaluation of information system investment.

33) (Falconer, Hodgett, 1995): "Strategic Information Systems Planning in Large Companies in Australia"

The study aimed to document certain aspects of practices of information systems management in large Australian companies.

The methodology was based on a structured questionnaire that was distributed on 200 Australian companies which have at least 500 employees. The response rate for the survey was 35%.

The study found that most organizations recognize the strategic nature of organizational data and undertake SISP. However, many organizations failed to identify their own information requirements. 58% of respondent organizations prepare separate information systems plans. Only 38% of chief executives have a major involvement in SIS planning, while senior managers generally have a high involvement. A diverse range of problems and issues was reported by the respondents such as: existing systems inadequacies, insufficient non-HR resources, lack of planning and coordination and human resources lack of IS knowledge.

34) (Lederer, Sethi, 1988) "The Implementation of Strategic Information Systems Planning Methodologies"

This study aimed to define SISP and describes three popular SISP methodologies and to examine the e problems faced by information systems managers when they attempt to implement such a methodology.

The methodology of the study was based on a questionnaire that was mailed to 251 organizations, 163 firms returned he completed survey for a response rate of 65%. 80 (or 32%) of these firms had already participated an SISP study and thus provided usable data.

The study found that the two problems rated most severe were the difficulty in securing top management commitment for implementing the plan and the need for substantial further analysis in order to carry out the plan.

1.7.4 Comments on Previous Studies

The mentioned previous studies used different types of methodologies and were conducted on different types of organizations including the governmental institutions, public security establishments, and private sector firms. These studies conducted on different countries with different societies, environments and cultures in the period between 1988 and 2013. The applied samples vary in their types. Part of the results that were found throughout this study come on line with the previous researches and other findings were the privilege of this study.

The previous studies helped the researcher in forming the research variables and in preparing the questionnaire paragraphs. Also, the previous studies were important in analyzing the research results.

The previous studies varied in their way of dealing with information systems and with innovation. Some studies dealt with SISP and its role in achieving competitive advantage, while other studies concentrated on the role of IT in achieving organizational innovation or the effect of IT on employees' performance. Other studies tried to identify the success factors and the inhibitors of SISP.

This study has many differences from the previous studies; one difference is about the dependent and independent variables. Also, the researcher used a predefined model to measure the level of strategic innovation and this model was prepared by a consulting company. The main difference of this research from the previously mentioned studies is that it is the first research which links between SISP success factors and the level of strategic innovation. Also it is the first Palestinian research that focuses on the Strategic Planning of Information Systems.

Chapter Two

Literature Review

This chapter consists of the following sections:

2.1 Strategic Information Systems Planning (SISP)

2.1.1 Introduction

For a long time relationship between information system functions and corporate strategy was not of much interest to Top Management of firms. Information Systems were thought to be synonymous with corporate data processing and treated as some back-room operation in support of day-to-day mundane tasks (Rockart, 1979).

In the 80's and 90's, however, there has been a growing realization of the need to make information systems of strategic importance to an organization. Consequently, strategic information systems planning (SISP) is a critical issue. In many industry surveys, improved SISP is often mentioned as the most serious challenge facing IS managers (Pavri and Ang, 1995).

Strategic thinking about information technology (IT) emerged in the 1980s when IT changed its role from an automation tool to a facilitator and, ultimately, an enabler of business. With its widespread use throughout organizations, IT also became a significant cost factor which called for cost justifications and deliberate planning of IT investments. This in turn gave rise to long term planning of IT costs, investments in IT-based information systems (IS), as well as their impact on the business. Long term and more strategic considerations in IS planning also shaped the role of the IT manager. Traditional IT managers were in charge of implementing technology, operating information systems and, if this happened at all, controlling costs. In this role, they reported to departmental heads or chief financial officers (CFO). But, with rising strategic concerns in IT, a new type of IT manager emerged: the so called "Chief Information Officer" (CIO). In contrast to traditional IT managers, CIOs are expected to actively participate in strategic business planning, take responsibility of IT cost, and justify IT investments with the business value generated through IT. As advocates of IT on the top management level, CIOs are often members of the board reporting directly to the CEO. (Teubner and Mocker, 2008).

Not surprisingly, with the proliferation of CIO type IT managers Strategic IS Planning (SISP) became a topic of high relevance in practice. It has been among the

highest ranked issues on management agendas for more than two decades (Luftman et al, 2006).

In line with its importance it is common that bigger enterprises that largely build their business on information technology (IT) have dedicated SISP management positions such as “Head of IT strategy” or “Director Strategic IT Management” (Mocker and Teubner, 2006).

According to Xu J. and Quaddus M. (2013), efficient and strategic use of information holds the key to enhanced competitiveness, increased efficiency, better resource allocation, and improved effectiveness.

In order to put the planning for strategic information systems in perspective, the evolution of information systems according to the three-era model of John Ward, et al. (1990) is pertinent. According to this model there are three distinct, albeit overlapping, eras of information systems, dating back to the 60’s. The relationship over time of the three eras of information systems is shown in table (2.1). (Pant and Hsu, 1995)

Table (2.1): The Three Era Model of IS

	ERA	**CHARACTERISTICS**
60s	Data Processing (DP)	Standalone computers, remote from users, cost reduction function.
70s &80s	Management Information Systems (MIS)	Distributed process, interconnected, regulated by management service, supporting the business, user driven.
80s &90s	Strategic Information Systems (SIS)	Networked, integrated systems, available and supportive to users, relate to business strategy, enable the business - business driven.

Source: (Ward, et al., 1990)

Strategic Information Systems Planning in the present SIS era is not an easy task because such a process is deeply embedded in business processes. These systems need to cater to the strategic demands of organizations, i.e., serving the business goals and creating competitive advantage as well as meeting their data processing and MIS

needs. The key point here is that organizations have to plan for information systems not merely as tools for cutting costs but as means to adding value. The magnitude of this change in perspective of IS/IT's role in organizations is highlighted in a Business Week article, 'The Technology Payoff'. According to this article, throughout the 1980s US businesses invested a staggering $1 trillion in the information technology. This huge investment did not result in a commensurate productivity gain - overall national productivity rose at a 1% annual rate compared with nearly 5% in Japan. Using the information technology merely to automate routine tasks without altering the business processes is identified as the cause of the above productivity paradox. As IT is used to support breakthrough ideas in business processes, essentially supporting direct value adding activities instead of merely cost saving, it has resulted in major productivity gains. In 1992, productivity rose nearly 3% and the corporate profits went up sharply. According to an MIT study quoted in the above article, the return on investment in information systems averaged 54% for manufacturing and 68% for all businesses surveyed. This impact of information technology on re-defining, re-engineering businesses is likely to continue and it is expected that information technology will play increasingly important roles in future. (Business Week, June 14, 1993).

Thus, we can see that more interest is being given to the Strategic Information Systems Planning, because managers realized the role of information systems in the strategic level. This means that the role of SISP is not only meeting company data processing and MIS needs, but also it serves the business goals and creates competitive advantage.

2.1.2. Definitions of SISP

Lederer and Sethi (1988) state that "(SISP) is the process of deciding the objectives for organizational computing and identifying potential computer application which the organization should implement"

Battaglia, (1991) says that SISP is a management function and not a technical one and defines SISP as, "the analysis of a corporation's information and processes using business information models together with the evaluation of risk, current needs

and requirements. The result is an action plan showing the desired course of events necessary to align information use and needs with the strategic direction of the company".

Lederer & Gardiner, (1992) define SISP as, "The process to identifying a portfolio of computer-based applications that will assists an organization executing its business plans and realizing its business goals. It is sensitive to the dynamic politics and culture of the organization or communities and is aware of the sociological environmental changes".

Doherty et al. (1999) state that SISP is “the process of identifying a portfolio of computer-based applications to be implemented, which is both highly aligned with corporate strategy and has the ability to create an advantage over competitors”.

Hevner et al. (2000) state that “(SISP) is the process of aligning an organization’s business strategy with effective computer-based information systems to achieve critical business objectives”.

SISP can be defined as “the process of determining an organization’s portfolio of computer-based applications that will help it achieve its business objectives” (Newkirk & Lederer, 2007).

Hovelja, T. et al (2010) define SISP as a continuous learning process, encompassing the IS/IT strategy formulation and implementation activities, in which various stakeholders tightly cooperate to assure maximum utilization of IT to gain sustainable economic success of the enterprise.

From the definitions above, we can conclude that SISP is a planning process which defines a group of computer-based applications, which aims at aligning information systems in the organization with its strategy to create competitive advantage and achieve business goals.

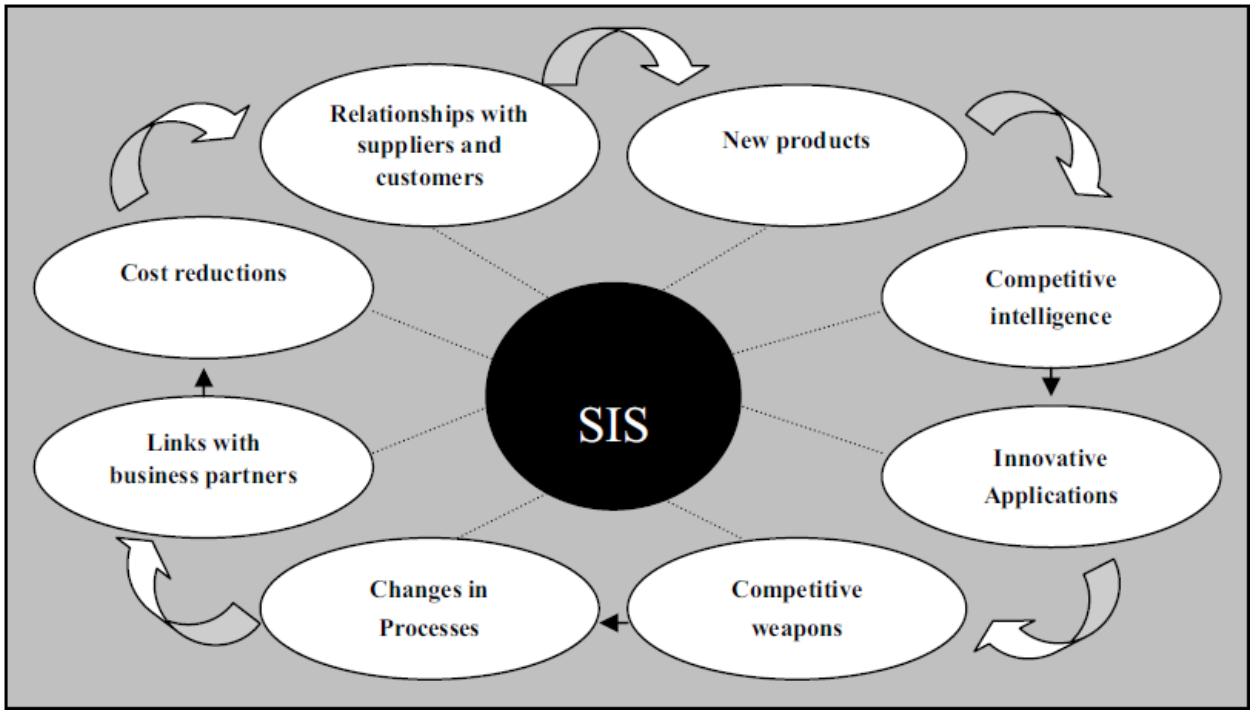
2.1.3 Objectives of SISP

Starting with Strategic Information Systems (SIS) first, and as Bhatnagar (2006) believes the advances in IT have affected the lives of most of the human beings in their day-to-day lives, but the strategic IS may deliver a product or service that is at a lower cost, that is differentiated, that focuses on a particular market segment, or is innovative. With the passage of time, the technology has evolved immensely and so have the opportunities. IT is being used in the business activities for improving the efficiency and effectiveness of the people and the business on the whole. The increasing demand of IS and IT has made the management of the more and more complex and difficult. SISs are different from other comparable systems as: (Hemmatfar et al, 2010)

- They change the way the firm competes.
- They have an external (outward looking) focus.
- They are associated with higher project risk.
- They are innovative (and not easily copied).

Turban et al (2006) introduce eight factors for IT contribution in Strategic management, these factors are shown in Figure (2.1):

Figure (2.1): Strategic Information systems and strategic points



Source: Turban et al (2006)

Now, regarding the planning of SIS which is SISP, the concept of SISP has developed over the last decades. In the 1970s, and according to McLean and Soden (1977), the primary objectives of systems planning were to improve communication with users, to increase top management support, to better forecast resource requirements and allocate resources, to determine more opportunities for improving the MIS department, and to identify new and higher payback computer applications.

In the 1980s, Moskowitz (1986) observes that additional objective of SISP has become the development of organization-wide data architecture. Simultaneously both Vitale, et al. (1986) and Index Systems (1986) say that the identification of strategic applications has arisen as another main objective of SISP.

And according to Galliers & Leidner (2003), there are five main objectives of SISP:

- Aligning IS with business needs
- Seek competitive advantage from IT
- Gain top management commitment
- Forecast IS resource requirements
- Establish technology path and policies

2.1.4 Dimensions of SISP

According to Segars et al. (1998), there are six dimensions of strategic information systems planning:

- **Comprehensiveness**

It is widely regarded as the extensiveness of the search for solutions, which must be balanced against the costs of time and financial resources

- **Formalization**

The existence of structures, techniques, written procedures, and policies that guide the planning process

- **Focus**

The balance between creativity and control orientations inherent within the strategic planning system.

- **Flow**

Locus of authority and devolution of responsibilities

- **Participation**

The extent to which multiple functional areas and key personnel at lower levels of the organization are involved; as well as the extent of lateral communication in the process

- **Consistency**

The frequency of planning activities and performance evaluation. High levels of consistency are characterized by frequent meetings, constant communication and reassessments of the overall strategy, which are all valuable in a dynamic organizational environment.

2.1.5 SISP Approaches

According to Earl (2003) and Earl (1993), the approach to SISP determines how the SISP process is executed and which methods are applied. He suggests five approaches of SISP, Business-Led, Method-Driven, Administrative, Technological, and Organizational. Galliers & Leidner (2003) have reproduced these approaches in the following manner:

- **Business-led approach**

The underpinning 'assumption' of this approach is that current business direction or plans are the only basis upon which IS plans can be built and that, therefore, business planning should drive SISP. The emphasis is on the business leading IS and not the other way around. Business plans or strategies are analyzed to identify where information systems are most required. Often this linkage is an annual endeavor and is the responsibility of the IS director or IS strategic planner (or team). The IS strategic plan is later presented to the board for questioning, approval, and priority-setting.

- **Method-driven approach**

Adherents of this approach appear to assume that SISP is enhanced by, or depends on, use of a formal technique or method. The IS director may believe that management will not think about IS needs and opportunities without the use of a formal method or the intervention of consultants. Indeed, recognition or anticipation of some of the frustrations typical of the Business-Led Approach may prompt the

desire for method. However, any method will not do. There is typically a search for the ‘best method’, or at least one better than the last method adopted.

- **Administrative approach**

The emphasis here is on resource planning. The wider management planning and control procedures were expected to achieve the aims of SISP through formal procedures for allocating IS resources. Typically, IS development proposals were submitted by business units or departments to committees who examined project viability, common system possibilities, and resource consequences. In some cases, resource planners did the staff work as proposals ascended the annual hierarchical approval procedure. The Administrative Approach was the parallel of, or could be attached to, the firm’s normal financial planning or capital budgeting routine. The outcome of the approach was a one-year or multiyear development portfolio of approved projects. Typically no application is developed until it is on the plan. A planning investment or steering committee makes all decisions and agrees on any changes.

- **Technological approach**

This approach is based on the assumption that an information systems-oriented model of the business is a necessary outcome of SISP and, therefore, that analytical modeling methods are appropriate. This approach is different from the Method-Driven Approach in two principal characteristics. First, the end product is a business model (or series of models). Second, a formal method is applied based on mapping the activities, processes, and data flows of the business. The emphasis is on deriving architectures or blueprints for IT and IS, and often Information Engineering terminology is used. Architectures for data, computing, communications, and applications might be produced, and computer-aided software engineering (CASE) might be among the tools employed. A proprietary technology oriented method might be used or adapted in-house. Both IS directors and general managers tend to emphasize the objectives of rigorous analysis and of building a robust infrastructure.

- **Organizational approach**

The underpinning assumption here is quite different. It is that SISP is not a special or neat and tidy endeavor but is based on IS decisions being made through continuous integration between the IS function and the organization. The way IT applications are identified and selected is described in much more multi-dimensional

and subtle language. The approach is not without method, but methods are employed as required and to fit a particular purpose. For example, value analysis may be used, workshops arranged, business investigation projects set up, and vendor visits organized. The emphasis, however, is on process, especially management understanding and involvement. For some of these companies, a major SISP method had been applied in the past, but in retrospect it was seen to have been as much a process enabler as an analytical investigation. Executive teamwork and an understanding of how IT might contribute to the business were often left behind by the method rather than specific recommendations for IS investment.

Table (2.2) shows a comparison between the five approaches in terms of strengths and weaknesses.

Table (2.2): Strengths and weaknesses of SISP approaches

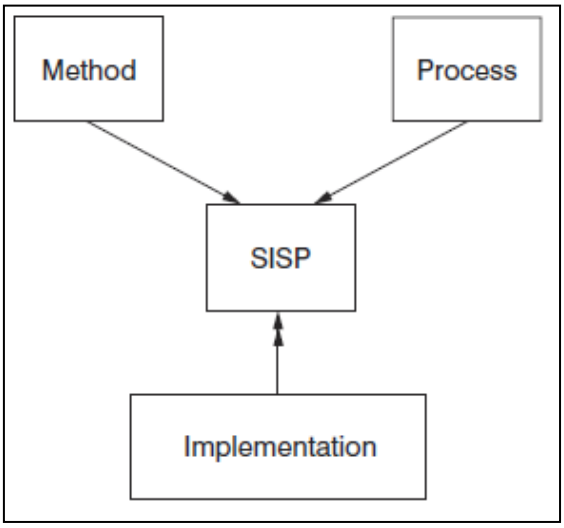
	Business-Led	Method-Driven	Administrative	Technological	Organizational
Strengths	Simple	Provides a methodology	System viability	Rigor	Becomes normal
	Business first	Plugs strategy gaps	System synergies	Focus on infrastructure	Emphasis on implementation
	Raises IS status	Raises strategy profile		Favors integrated tools	Promotes IS-user partnership
Weaknesses	Ad hoc method	User involvement	Non-strategic	Lacks management support	Generation of new themes
	Lacks management commitment	Too influenced by method	Bureaucratic	Only partial implementation	Soft methodology
	Depends on quality of business strategy	Implementation unlikely	Resource-constrained	Complexity	Architecture becomes difficult

Source: Galliers & Leidner (2003)

Earl (2003) defines the SISP approach in terms of the interaction of method, process, and implementation, as well as the variety of activities and behaviors. He uses nine criteria to characterize the approach taken towards SISP: emphasis, basis, ends, method, nature, influencer, business strategy relation, priority setting, and role of IS. These criteria have proved to be effective in differentiating SISP approaches in practice. (Earl, 2003).

Galliers & Leidner (2003) suggest that method, process, and implementation are all necessary conditions for successful SISP as shown in Figure (2.2).

Figure (2.2): Necessary conditions for successful SISP



Source: Galliers & Leidner (2003)

Below is a description of the methodologies, Process and Implementation of SISP.

2.1.5.1Methodologies of SISP

While reviewing the literature, we could find that there are many methodologies for SISP. Table (2.3) shows a number of SISP methodologies that was listed by Pita et al. (2008).

Table (2.3): SISP Methodologies

Method/1	Fuzzy Cognitive Maps
Top-down	Business Portfolio Analysis
Balanced Scorecard Analysis	Bottom-up
SWOT analysis	Information Systems Planning
BIA Integration Technique	Business Systems Planning
BI Characterization Study	IS Investment Strategy
Resource Life Cycle	SWOT analysis
Executive Information Planning	Combination Bottom-Up and Top-Down
Inside-out	Ends Means Analysis

Source: Pita et al. (2008)

Lederer and Sethi (1988) say that organizations may choose to adopt a specific SISP methodology or modify an existing strategic management planning strategy and incorporate information technology. An organization may also choose to combine a number of SISP methodologies into a SISP approach. (Doherty et al., 1999).

Doherty et al. (1999) state that choosing a specific SISP methodology is a critical issue. Pita et al. (2008) state that one of the major issues on the IS planning agenda is choosing the right methodology, and that the use of more than one methodology is preferred. Also, Pita et al. (2008) note that the selection of a wrong SISP methodology can significantly contribute to SISP failure.

Selected SISP methodologies

In order to find common stages of SISP methodologies, Fergerson (2012) analyzed five selected common SISP methodologies. These methodologies are: (a) a maturity model of SISP, (b) business systems planning (BSP) and strategic systems planning (SSP), (c) ISSP process model, (d) SISP process with box structures method, and (e) integrated SISP methodology.

a) A maturity model of SISP

Cheong et al (2011) provide high-level stages of the information systems planning process. They break down SISP into three stages: (a) formulation, (b) formation, and (c) evaluation. In order for IS to be successful and for SISP to be effective, all three stages must be in place.

b) Business systems planning (BSP) and strategic systems planning (SSP)

BSP involves a top-down planning process with a bottom-up implementation and places a heavy emphasis on executive involvement. Strategic system planning (SSP) was developed by Robert Holland and is a model defined by business. SSP is materially the same as BSP with the exception of SSP's automated storage, manipulation, and presentation of the data collected during the SISP process. While the language differs, the stages in SSP are similar to BSP. (Lederer and Sethi,1988).

c) ISSP process model

Gregory Mentzas developed an information systems strategy planning (ISSP) process with the aim to increase planning usefulness in organizations (Mentzas, 1997). Mentzas' process model identifies separate elements of the ISSP planning process which include phases, stages, and modules of activities. The process model "aims to satisfy the need for a consistent linkage with corporate strategy by adopting elements of the corporate strategic planning literature". Mentzas (1997) notes that

several terms have been used to describe strategic IS planning (e.g., strategic information planning, information strategic planning) but views the process as context independent.

d) SISP process with box structures method

Hevner and Studniki (2000) suggest that "an overarching reason for implementation failure is a large specification gap between the recommended IS solutions and the detail required to actually implement the desired information systems". Additionally, they state that one of the reasons that SISP implementations are perceived as failures is the inability to effectively implement the solutions. As a solution to the SISP specification gap, Hevner and Studniki (2000) propose the use of box structure methods with SISP. They state that "the key asset of box structure representations and methods is that they are scale-free. Box structures can handle the full range from high-level system abstractions to low-level abstractions with the same amount of rigor and precision".

e) Integrated SISP methodology

In an effort to solve the nine SISP problems identified by Lederer and Sethi (1988), Min et al. (1999) propose a methodology that solves the issues while maintaining the positive qualities of existing SISP methodologies. Min et al. (1999) categorize the nine issues into those that relate to SISP methodologies and those that relate to corporate culture. They suggest that the duration of SISP is also too long, given the consideration on the fast moving evolution of IT and suggests that their methodology "concentrates on maximizing strategic effectiveness while minimizing the use of corporate resources, especially time".

Generalized key stages across selected SISP methodologies

Based upon the analysis performed on the stages within the five selected methodologies, Fergerson (2012) presented a set of generalized key stages across the selected SISP methodologies. The generalized steps of SISP and their main activities are presented in the following table (2.4):

Table (2.4): Generalized key stages across five selected SISP methodologies

SISP Key Stages	Activities
Preparation	Secure executive commitment. reasons/ Approval for SISP. Identify executive project champions.
Planning	Identify team and process. Create planning committee. Ensure strategic management plan serves as input to strategic information systems plan. Select SISP method(s). Develop solutions and alternatives.
Organizational and IS Strategy Analysis	Identify current state of business processes in the organization. Conduct operational analysis-SWOT. Identify critical success factors. Identify corporate mission and strategic objectives using strategic management planning. Determine levels of alignment and business alignment. Analyze IT systems and processes. Identify current state of IT and strategic alignment to the organization. Identify unique IS opportunities.
Implementation	Create development sequence. Document and execute implementation/action plan.
Evaluation	Assess compatibility with strategic goals. Develop inventory of actions for strategy implementation. Study of implementation procedures. Plan action prioritization Conduct study of each action element. Evaluate cost dimension. Analyze migration and cut-over aspects, risk management, strategic importance. Assess satisfaction of needs.
Revision	Define follow-up and control procedures. Specify procedures and indicators for implementation monitoring. Specify quality management system.

Source: Fergerson (2012)

2.1.5.2 Process of SISP

SISP methodologies can be regarded as being comprised of two interrelated features: techniques and process (Baker, 1995). While the process can be seen as a sequence of activities, the techniques supports the planner in carrying out these SISP activities successfully. In an early understanding, the SISP process was interpreted as the process of "SIS-Planning", i.e. planning for competitive IS (Wiseman, 1985). Later on, the term was used in a wider sense of "strategic planning for IS" comprising the full spectrum of "key analytical, evaluative and creative activities which result in a final strategic plan" (Flynn and Goleniewska, 1993). Taking account of both understandings, Doherty et al (1999) define the SISP process as " an exercise or ongoing activity that enables organizations to develop priorities for information system (IS) development" where "applications are chosen for their alignment with business objectives or their capacity to create significant impact on the organisation's competitive positioning". Table (2.5) depicts seven exemplary SISP activities that Flynn and Goleniewska (1993) extracted from the process models underlying five germane SISP methodologies.

Table (2.5): Activities covered by traditional SISP methodologies

Task	Description
1. Access business goals and strategies	Consider organisational goals and strategies and the business and IT aims
2. Evaluate current set of information systems	Evaluate the strength and weaknesses of the current state of IT application and the set of information systems
3. Identify information needs	Identify the information needs of the organisation
4. Evaluate competitive business environment	Evaluate the external competitive business environment including business threads and opportunities with special interest in the competitor's use of IT
5. Assess IT environment	Assess the external technological environment, observe and evaluate technological trends
6. Define system priorities	Agree on priorities concerning the development of new systems as well as the maintenance and reengineering of old systems
7. Setup project definitions and portfolio	Define the projects to be carried out within the planning horizon in terms of objectives, budget, timetable and personnel requirements.

Source: (Flynn and Goleniewska, 1993)

2.1.5.3 Implementation (Organization) of SISP.

Closely related to the SISP process is the question of how to organize the activities involved in SISP. Perhaps the most obvious question that concerns the organization of SISP (not to be confused with the strategic organization of the IT function) is whom to involve in the process. (Teubner and Mocker, 2008).

According to Lederer and Sethi (1988), Implementation was a common concern. Even where SISP was judged to have been successful, the resultant strategies or plans were not always followed up or fully implemented. Even though clear directions might be set and commitments made to develop new applications, projects often were not initiated and systems development did not proceed.

Evidence from the interviews suggests that typically resources were not made available, management was hesitant, technological constraints arose, or organizational resistance emerged. Where plans were implemented, other concerns arose, including technical quality, the time and cost involved, or the lack of benefits realized. (Galliers & Leidner, 2003).

2.1.6 Problems and Barriers in applying SISP

The most comprehensive description of SISP problems among the literature we have read was the description of Galliers & Leidner (2003).

Galliers & Leidner (2003) summarizes the five most commonly mentioned features contributing to dissatisfaction in SISP in table (2.6):

Table (2.6): Unsuccessful features of SISP

Rank order	Unsuccessful features
1	Resource constraints
2	Not fully implemented
3	Lack of top management acceptance
4	Length of time involved
5	Poor user-IS relationships

Source: (Galliers & Leidner 2003)

Galliers & Leidner (2003) classify problems and barriers - referred to them as concerns- in terms of Method concerns, Process concerns, and Implementation concerns.

- **Method concerns**

Among the stated concerns were lack of strategic thinking, excessive internal focus, too much or too little attention to architecture, excessive time and resource requirements, and ineffective resource allocation mechanisms.

- **Implementation concerns**

Typically resources were not made available, management was hesitant, technological constraints arose, or organizational resistance emerged. Where plans were implemented, other concerns arose, including technical quality, the time and cost involved, or the lack of benefits realized.

- **Process concerns**

Process concerns included lack of line management participation, poor IS user relationships, inadequate user awareness and education, and low management ownership of the philosophy and practice of SISP

The full list of concerns of SISP by Galliers & Leidner (2003) is represented in Appendix A.

2.1.7 Success Factors of SISP

According to Rockart (1979), Critical Success Factors (KSFs) are those factors that determine success or failure for strategic IS planning. They represent those areas that management must pay special attention in order to bring about success in strategic IS planning.

Ang & Teo (1997) compiled a list of ten KSFs from the literature and the discussion with Information Systems experts, and they aimed to rank these ten KSFs according to their importance to SISP success.

Ang & Teo (1997) ranked the KSFs of SISP in the following manner:

1- Getting top management support for the planning efforts:

Top management support emerged as the top CSF. The critical role of top management is in providing leadership and setting the overall direction.

It is important that top management participation be active, and not merely symbolic. Simply giving the go ahead for the IS planning process is not sufficient. Some of the ways that management can demonstrate its commitment are as follows:

- Showing interest by, (a) holding management team meetings, (b) sitting in IS steering committee meetings, (c) spending time with those who are actively involved in the IS planning process, (d) getting involved in some of the issues through regular feedback, (e) helping to resolve problems encountered by the steering committee, and (f) monitoring the implementation of IS plans.
- Providing the necessary resources. Having adequate resources is crucial for successful IS planning as well as implementation of IS plans. This can be done by providing more manpower and a larger budget, if necessary.
- Providing leadership, by (a) setting the overall direction for the company (which can be done by setting up an executive steering committee to oversee and monitor the IS planning process), (b) making sure that plans are translated into actions, and (c) creating an awareness of the importance of IS planning.

Top management support was also considered as an important success factor of SISP in the studies of (Yang, J. et al, 2011) and (Hovelja, T. et al, 2010).

2- Having a clear-cut corporate plan to guide IS planning effort

A clear-cut corporate plan to guide IS planning efforts was next in importance. The first step in setting goals is to define the scope of the IS planning process. This is not as simple as it seems. Everyone in the organization will almost always have a different understanding (whether slight or otherwise) of the IS planning objectives and boundaries. The scope should be limited to real business needs.

There is a need to achieve a good fit between corporate objectives and the IS plan.

IS planning should not be viewed as just putting together a portfolio of systems. IS planners must deconstruct a business enterprise into processes and determine if they are adequately supported by the existing systems.

Having a clear-cut corporate plan to guide IS planning effort was also considered as an important success factor of SISP in the studies of (Yang, J. et al, 2011), (Hovelja, T. et al, 2010), and (Ramadan, H.M. et al, 2007).

3- Good user-IS relationships

A good user-IS relationship is, therefore, crucial towards effective cooperation in IS planning, and it is disheartening to find that many companies do not practice it to any great degree.

The framework for effective user-IS relationships really starts with top management, who must set the tone for the company. Only when IS and users are able to view issues from each other's perspective, coupled with leadership from top management, can good IS-user relationship be readily achieved.

In addition, partnership between business and IS staff makes it easier for the organization to leverage IT in achieving strategic objectives.

Good user-IS relationships was also considered as an important success factor of SISP in the studies of (Yang, J. et al, 2011) and (Al-Hayali, A. et al, 2009).

4- Being able to obtain sufficiently qualified personnel to do a proper job

Despite its importance, most IS planning studies did not treat this as a critical factor. McLean and Soden (1977) submitted this factor under 'personnel plan', one of the items to be included in the IS plan.

One possible reason is that companies tend to rely on the expertise of the vendors of hardware and software. But one can only rely on this expertise up to a certain point because outside experts are not likely to be well versed with the firm's corporate objectives and culture.

Qualified personnel was also considered as an important success factor of SISP in the studies of (Basahel, A. et al, 2009) and (Hovelja, T. et al, 2010).

5- Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process

The field of IT is changing rapidly in this era of global competition. New IT products can open up new avenues for competitive advantage. Hence, it is not surprising that the ability to anticipate and identify new information technologies is identified as an important factor.

Anticipating likely changes in IT was also recommended by the study of (Ramadan H.M. et al, 2007) for developing information technology (IT) strategic plans. It was also considered as an important success factor of SISP in the studies of (Yang, J. et al, 2011) and (Hovelja, T. et al, 2010).

6- Having a clear, concise, formal planning procedure

McLean and Soden (1977) recognized that formal IS planning procedures are necessary as systems become more complex, require longer development periods, involve multiple functions and cut across departments. Moreover, a clear, concise planning procedure is useful in that it divides the IS planning process into distinct stages, each of which has its own set of deliverables.

Proper planning procedure or methodology also helps to ensure that IS planning is carried out systematically, involving all major stakeholders. In addition, IS plans are more likely to be aligned with business plans so that IS can better serve business needs. Furthermore, prioritization of IS projects in terms of its strategic value can be more objectively assessed with the use of proper planning procedure or methodology.

Having a clear, concise and formal planning procedure was also recommended by the study of (Ramadan H.M. et al, 2007) for developing information technology (IT) strategic plans.

7- **Having free communication and commitment to change throughout the organization**

IS planning is an undertaking of significant dimensions affecting people both within and outside the IS function. Inevitably uncertainty pervades and free communication is a strong antidote. IS planners need to keep people informed of their actions and decisions.

Usually, the IS department is viewed as a water-tight, insulated department, far removed from the others. This perception can be changed with clear direction from top management. In other words, top management with a clear vision of the strategic role of IT can encourage free communication and commitment to change throughout the organization. Communication within the organization also provides an effective way to identify suitable strategic IT applications as well as opportunities to leverage IT more effectively. IS planners should recognize that the success of the IS planning process relies ultimately on its understanding and acceptance by the people in the organization.

Having free communication was also considered as an important success factor of SISP in the study of (Yang, J. et al, 2011).

The remaining three KSFs are with less importance according to the study of Ang & Teo (1997), which are:

8- **Investing sufficient 'front-end' time to ensure that all planning tasks and individual responsibilities are well understood.**
9- **Deciding on an appropriate planning horizon.**
10- **Taking into account the people and politics side of strategic IS planning process.**

This tool of evaluation of the success of SISP will be used by this research to assess SISP KSFs in ICT firms in Gaza Strip. However, only the first 7 factors will be considered in this study since they have a considerable rank according to the study of Ang & Teo (1997).

2.2 Strategic Innovation

2.2.1 Introduction

In the 1960s, the dominant theme in the field of strategic management was corporate planning and managers were largely concerned with planning for the growth that had been spurred by reconstruction of Europe and Japan, and the Cold War, following World War II. The SWOT (Strength, Weaknesses, Opportunities, and Threats) framework became popular as the tool of choice for identifying and analyzing those internal and external factors that were favorable or unfavorable to achieving firm objectives. In the late 1960s and early 1970s, the primary theme had shifted to corporate strategy and the issues of the day were dominated by diversification and portfolio planning. (Afuah, 2009)

In the late 1970s and early 1980s, the theme shifted to industry and competitive analysis, and the primary issues became the choice of which industries, markets, and market segments in which to compete, and where within each industry or market to position oneself. Porter's Five Forces and business system (value chain) were the analytical tools of the day. (Afuah, 2009)

In the late 1980s and early 1990s, the theme had evolved into the pursuit of competitive advantage and its sources within a firm. Professors C.K. Prahalad and Gary Hamel's core competence of the firm and the resource-based view of the firm emerged as the dominant themes. (Afuah, 2009)

From the late 1990s to today, the dominant themes have been strategic innovation, globalization, and the impact of information and communications technologies on value-adding activities. The primary issues have been and continue to be how to gain a competitive advantage through strategic innovation using new game strategies, and how to compete in a world with rapid technological change and increasing globalization. A strategic innovation is a game changing innovation in products/services, business models, business processes, and/or positioning vis-à-vis competitors to improve performance. A firm's new game strategy is what enables it to perform well or not so well in the face of a strategic innovation. Thus, to perform

better than its competitors in the face of a new game, a firm needs to have the right new game strategies. (Afuah, 2009).

According to Kuhn & Marsick (2005), Today's competitive environment presents difficult challenges for executives in many mature organizations: global competition, industry convergence, disruptive technologies, new entrants, evolving customer needs, and the rapid commoditization of products and services. Facing ongoing growth and earnings pressures, executive sponsors of senior-level action learning programs are increasingly asking participants to 'think differently' about the business, to look at markets expansively, and to conceptualize new sources of customer value that will catalyze new businesses and revenue streams. In the language of the new competitive playing field, they are asking for strategic innovation.

2.2.2 Definitions of Strategic Innovation

Strategic Innovation is the creation of growth strategies, new product Categories, services or business models that change the game and generate significant new value for consumers, customers and the corporation. Strategic Innovation challenges an organization to look beyond its established business boundaries and mental models and to participate in an open-minded, creative exploration of the realm of possibilities. (Derrick & Soren, 2007).

According to Baden & Pitt (1996), Strategic innovation is a crucial means to create competitive advantage. Strategic innovation refers to a situation in which firms succeed dramatically in attacking an established industry leader thus creating competitive advantage (Markides, 1998).

Strategic innovation is used for creating a new marketplace by firms changing the rules of a game. (Kim & Mauborgne, 1999). Rajoapalna and Speritze (1996) believe that strategic innovation achieves sustained growth by responding to the external environment and internal changes. With strategic innovation, firms could distribute qualified services with new methods to distant customers.

Some researchers treat strategic innovation as an all-inclusive term even though they are referring to very different events and processes (Cooper, 1990). The definition of strategic innovation from Daft and Becker (1982) includes different types of innovation, like new services or products.

Damanpour and Schneider (2006) believe innovations could be a new product/service, a new structure or administrative system, a new production process technology, or a new plan or program, process, product, or service which is new to organizations. According to Zain (1995), strategic innovation is always the output of successfully matching organizational requirements with environmental changes e.g., new ideas, process, techniques and services.

Strategic innovation is defined by Markides & Oyon (2010) as "a creative and significant departure from historical practice in at least one of three areas. Those areas are design of the end-to-end value chain architecture; conceptualization of delivered customer value; and identification of potential customers. Strategic innovation involves exploring the unknown to create new knowledge and new possibilities. It proceeds with strategic experiment to test the viability of new business ideas".

Robert & Douglas (2013) define strategic innovation as the creation of a compelling future state for the enterprise- a future that breaks the shackles of the past and of a predictable trajectory. It is also the generation of a remarkable future designed from the core values and inspired vision of the organization.

Keathley et al (2013) state that strategic innovation refers to the introduction of game-changing products, services, or strategies that bring significant new value to customers or users.

From the definitions above, we can conclude that strategic innovation means firstly changing the rules of the game (in terms of product/service development, growth strategies, the way of competence, and the boundaries of the business) which leads the company to achieve competitive advantage and distribute qualified services with new methods to distant customers.

2.2.3 Traditional strategy versus Strategic Innovation

Derrick & Soren, (2007) believes that there are major distinctions between Traditional Strategic Planning and the concept of Strategic Innovation. These differences are summarized in table (2.7)

Table (2.7): Traditional strategy versus Strategic Innovation

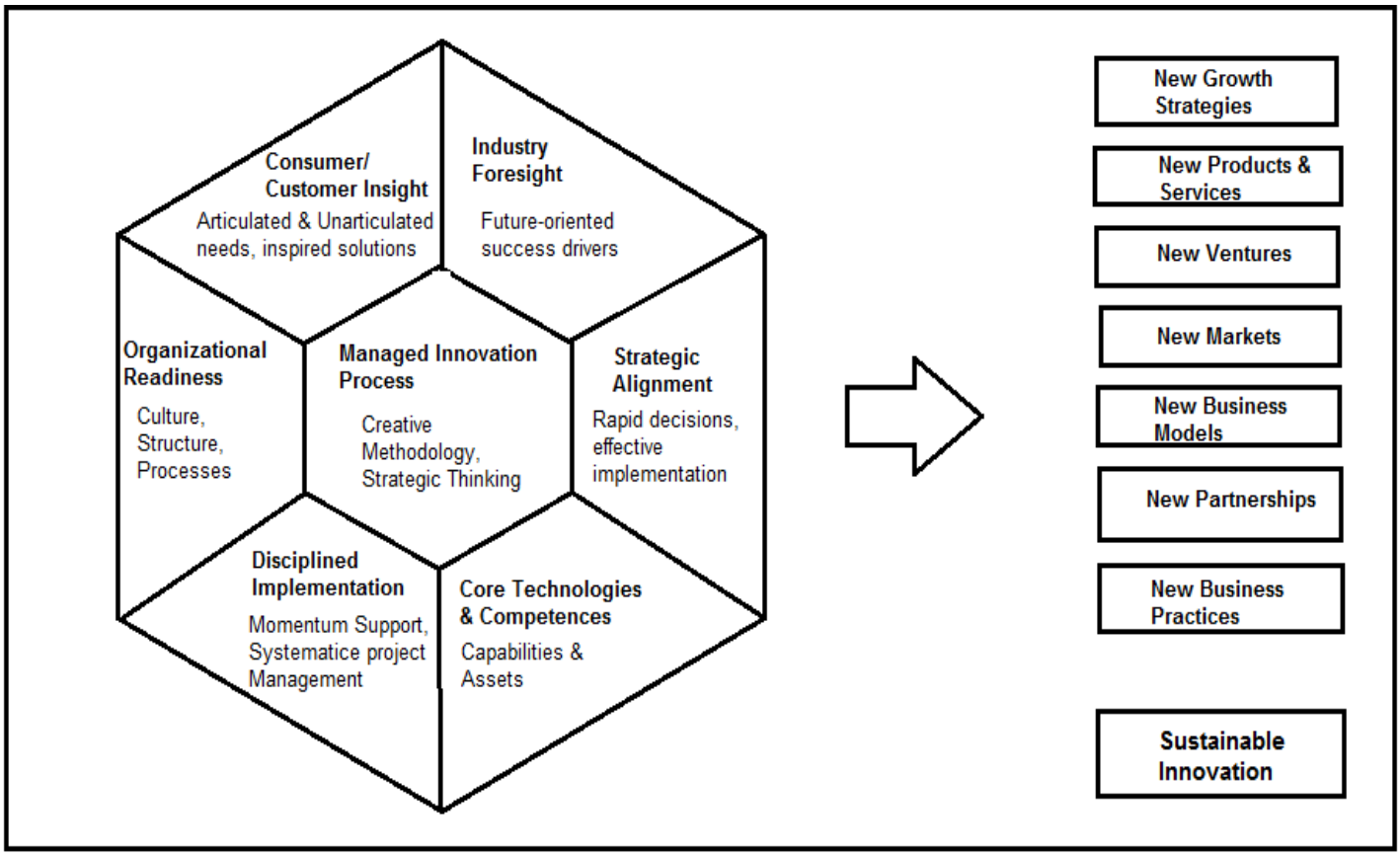
Traditional approaches	**Strategic Innovation approach**
Adopt a "present to future" orientation – takes today as the starting point	"Starts with the end in mind" – identifies long-term opportunities and then "bridges back to the present"
Assume a rule-maker/taker (defensive/follower) posture	Assumes a rule-breaker (revolutionary) posture
Accept established business boundaries/ product categories	Seeks to create new competitive space/ playing fields
Focus on incremental innovation	Seeks breakthrough, disruptive innovation – while continuing to build the core
Follow traditional, linear business planning models	Marries process discipline with creative inspiration
Seek input from obvious, traditional sources	Seeks inspiration from unconventional sources
Seek articulated consumer needs	Seeks unarticulated consumer needs
Are technology-driven (seek consumer satisfaction)	Is consumer-inspired (seeks consumer delight)
May have a "one-size-fits-all" organizational model	May experiment with entrepreneurial "new venture" or other organizational structures

Source: (Derrick & Soren, 2007)

2.2.4 Dimensions of Strategic Innovation

Derrick & Soren (2007) state that an organization moves beyond an ad hoc approach to innovation when it begins to develop and institutionalize a cultural mindset and a set of processes that support repeatable, Sustainable Innovation. This then becomes a foundation for ongoing competitive advantage. The Strategic Innovation framework is described in Figure 3.

Figure (2.3): Strategic Innovation framework



Source: (Derrick & Soren, 2007)

Derrick & Soren (2007) believe that The Strategic Innovation framework weaves together seven dimensions to produce a portfolio of outcomes that drive growth. These dimensions are:

1. **A Managed Innovation Process – Combining Non-Traditional and Traditional Approaches to Business Strategy**

The Managed Innovation Process covers the sequence of activities from the beginning of an initiative through implementation. It goes far beyond conducting a

simple brainstorming session. The process combines both unconventional and traditional elements. It includes the usual consumer, market trend and competitive analyses, but quickly looks beyond them.

The innovation process is divided into two broad modes of thinking: "Divergent" and "Convergent". The "Divergent" mode lies at the heart of the Strategic Innovation approach. It is open-ended, exploratory, and inquisitive, deploying non-traditional, creative thinking and future visioning techniques. It includes "exploratory" consumer/customer insight research, qualitative exploration of industry/market trends, and speculates on possible industry discontinuities, etc. While "Convergent" processes call for traditional business tools, techniques and data analysis, potential opportunities are evaluated, prioritized, refined and then often moved through a formal decision-based process until the most promising ones are implemented.

2. Strategic Alignment – Building Support

"Strategic Alignment" is the process of engaging the senior leadership team, a broad cross-section of the organization and key external stakeholders in the development of a shared vision and the path forward, which includes internal alignment and external alignment as well. Internal Alignment includes choosing the right team from inside the organization, while External Alignment includes building alignment with partner organizations by formally making them part of the co-creation process.

3. Industry Foresight – Understanding Emerging Trends

"Industry Foresight" is a "top-down" approach that explores the drivers, trends, enablers and dislocations within one or more industries. The world of meteorology provides a compelling analogy. The ongoing monitoring of a complex, intertwined set of meteorological forces allows us to develop a viewpoint how they may collide to impact our world in terms of the weather. Similarly, visionary organizations establish a process for monitoring the complex interplay of key trends that may potentially impact their business. It is in looking at the forces of

deregulation, industry convergence and emerging markets, and in exploring the intersections of social, demographic, technical, environmental, political, competitive and other trends that potential "white space" opportunities are revealed. Since today's world is not linear, we cannot extrapolate the past to predict the future.

Industry Foresight therefore goes beyond traditional market trend research by taking a speculative, "what if" perspective, seeking out – and in some cases even intentionally creating – industry disruptions.

4. Consumer/Customer Insight – Understanding Articulated and Unarticulated Needs

"Consumer/Customer Insight" is a qualitative, "bottom-up" approach that leverages insights into the behaviors, perceptions and needs of current and potential consumers/customers by involving them as true partners in the innovation process. It is a non-traditional, imaginative approach to research that seeks a deep understanding of needs and the drivers of behavior at a level well beyond what they consumers/customers are able to articulate themselves.

5. Core Technologies and Competencies – Leveraging and Extending Corporate Assets

A solid understanding of a company's core technologies and competencies provides a pragmatic filter against which imaginative ideas can be assessed and shaped into practical investment-worthy opportunities. Even when an organization possesses deep insight into consumer/customer needs and future trends, transforming ideas into action is an uphill battle unless there is a keen sense of the organization's inherent strengths and ability to leverage its core assets.

It is essential to not just consider an organization's technologies but also other capabilities that are integral to success. Such competencies may include intellectual property or patents, unique relationships with suppliers and partners, brand equity, speed and operational agility or unique business practices.

6. Organizational Readiness – Assessing The Ability to Take Action

Even with the most inspired vision and innovative products an organization may simply not be in a position to effectively implement. The approach therefore calls for an assessment of "Organizational Readiness" along three dimensions:

- **Cultural readiness:** This refers to the mindset and norms that allow individuals and teams to think imaginatively, to take prudent risks, and to seek out, create and introduce innovative solutions.
- **Process readiness:** This refers to the general business processes and practices that enable functional groups to operate effectively and collaborate toward a common goal as well as a robust set of methodologies and tools specifically designed to drive innovation.
- **Structural readiness:** This refers to the organizational structures and technologies that support innovation as well as levels of flexibility to assign available and qualified staff to high-priority projects – without question one of the leading barriers to implementation.

7. Disciplined Implementation – Managing the Path From Inspiration To Business Impact

While it is not easy to produce creative, visionary strategic thinking, it is equally challenging to successfully implement that thinking in a way that creates meaningful business results. For example, generating new product ideas is not necessarily that hard. It is in the act of execution – where the rubber meets the road – that innovation efforts frequently fail. It is here that an organization must demonstrate its ability to translate a Power Point presentation full of good ideas to the bottom line, by tenaciously negotiating the obstacle-ridden path to business impact.

Key considerations for implementing Strategic Innovation initiatives are:

- **Implementation skill sets and mindsets:** Different individual skill sets and mindsets are needed at different stages of the Strategic Innovation process. While many of the early team members will play a role throughout an initiative, additional individuals will join the team as the process unfolds. The task of "Disciplined Implementation" calls for pragmatic operational skills, exemplified

in individuals who are adept at working closely with others to tenaciously get the job done, and who have the energy, tenacity, persuasion and communications skills, political savvy, personal relationships and credibility to overcome organizational roadblocks.

- **Maintaining momentum:** At the end of the "Divergent" phase there is a significant risk of the effort grinding to a halt. There are numerous causes: organizational inertia, higher priorities, political agendas and competing demands for personnel or financial resources. There are several strategies for maintaining momentum, which include: building Strategic Alignment throughout the earlier stages; leveraging the organization's implementation related Best Practices; demonstrating early successes; maintaining internal visibility through a well-executed communications strategy that keeps senior management and key stakeholders committed; candidly stating the critical success factors and requirements to support the effort and obtaining senior management's early commitment to meeting them.
- **A formal project management approach:** At the end of the "Divergent" phase the Strategic Innovation effort changes from being a single thread of activity and takes the form of multiple concurrent "daughter" projects. These need to be tightly managed by paying attention to established Project Management practices, including: realistic expectations in timing and performance goals; appropriate resource allocation – staffing, budgets and access to information consistent with the scope of the desired business impact; and accountability, progress measurement and status reporting, both before and during the pilot/roll-out phases and throughout the in-market activities
- **An understanding of organizational priorities and decision making processes:** It is essential to be aware of the way an organization prioritizes, approves and continues to support initiatives. Any initiative is potentially at risk as market conditions change, if newly identified opportunities trigger a shift in priorities, if budget or other constraints suddenly come to the forefront, or if the decision making process lacks rigor. With much at stake it is clearly important to find ways to proactively reduce these risks.
- **A practical Stage Gate process:** A sound end-to-end innovation initiative is typically comprised of an exploratory, "fuzzy front end" process followed by

some kind of Stage Gate process. It is important to recognize the different roles of these two distinct processes. A major purpose of the front end process is to identify good, well-grounded business opportunities and ideas – ranging from incremental to breakthrough. The front-end process can be applied to identifying a wide spectrum of opportunities including products and services, new ventures, business models, partnerships and operational practices. Its other purposes are to build alignment and create momentum around opportunities, to narrow the funnel of possibilities and to define the strategic roadmap and high-level implementation plan. By contrast, the Stage Gate process traditionally focuses only on new products. It comes into play once new product concepts have been identified, and provides an operational roadmap for driving new product projects from idea/concept to launch, with a focus on improving decision-making and efficiency. To derive the greatest benefit from a Stage Gate process it is critical to ensure that the front end process has been divergent enough to deliver high quality ideas, ideally grounded in well-conceived platforms.

In addition to the above seven dimensions of strategic innovation, Derrick & Soren (2007) used additional three dimensions in order to measure the level of strategic innovation. These dimensions are:

8. Disciplined Implementation

The organization should consistently demonstrate its ability to create measurable business impact, and should take a disciplined approach to the implementation of strategic thinking.

9. Innovation Goals and Metrics

The organization has to establish innovation-related goals and measures (for example: “X% of revenues must come from products/services introduced over the past Y years”).

10. Capacity for Sustainable Innovation

The organization need to take the time to learn from its previous innovation efforts, and it is committed to deliberately build an innovation-based culture. In addition, the organization needs to institute a set of innovation-focused methodologies.

2.2.5 Barriers to Strategic Innovation

The definition of a business defines and limits how a company competes in a given market. On the one hand it needs to be clearly defined to provide orientation and to clearly position the company strategically. One the other hand it sets boundaries to the strategic imagination and keenness to experiment with innovations out of its scope. But there are also other barriers to innovation, such as: (Moeller et al, 2008)

- Lack of resources
- Complacency
- Core competencies resulting in core rigidities
- Lack of implementation
- Inadequate incentive system
- No innovation agenda
- Short-term orientation or focus on daily business
- Impatience
- Rigid structures and processes
- Rejection of new findings that could question the current assessment of reality
- Vested interests an politicking
- Exaggerated self-esteem of management-team
- Blind trust in recipes of the past
- Accustomed beliefs, habits and norms
- Fear to harm profitable core business

2.2.6 Success factors of Strategic Innovation

According to InnovationPoint (2002), there are eight success factors for strategic innovations:

1- Developing an Awareness of Articulated and unarticulated Customer Needs.
2- Looking Deeply and Insightfully into Customer Needs to Discover what Drives Behavior and Motivation
3- Involving Teams from Multiple Functions/ Business Units
4- Ensuring Management Involvement and Support
5- Willingness to Think Flexibly and Creatively about Current and Future Business
6- Suspension of Business Boundaries
7- Actively Identifying and Monitoring Current and Emerging Trends
8- Using the Long Term View to Drive Short Term Planning.

2.2.7 Cases of Strategic Innovation

In this section, we introduce some examples of strategic innovations, in order to make a clear vision about how companies realize the innovation. Charitou &Markides (2003) introduced good examples for these Strategic Innovations in table (2.8).

Table (2.8): Examples of Strategic Innovations

Industry	**Strategic Innovation**	**Innovator(s) and date of introduction**
General retailing (United States)	Online distribution	Amazon.com: July 1995 (books), June 1998 (music)
Car – rental industry (United States)	Focusing on a different type of customer and operating an extensive network of car-rental offices located in cities, rather than in major airports	Enterprise Rent-A-Car (The company was founded in 1957.
Computer industry (United States)	Selling computers directly to customers	Dell Computer:1983
Retail-brokerage industry (United States)	Online Trading	Aufhauser & Co.:1994 E-Trade,Charles Schwab:1996
Retail-brokerage industry (United	Operating an extensive network of	Edward Jones:1972

States)	single-broker offices across the country as separate profit centers	(The year when the company formally adopted the new business model)
Steel industry (United States)	Introduction of minimills (a low – cost production method to make flat – rolled sheet steel – a high-end steel product)	Nucor:1989 (introduced the world's first continuous, thin-slab casting facility for sheet steel)
Automobile industry (Europe)	Mass – customized cars	Smart car (by Daimler Chrysler): October 1998
Used – car business (United States)	A new retail and distribution method for selling used cars (extensive refurbishing of cars, product guarantees, no-haggle pricing and sophisticated use of in – house financing)	AutoNation USA, CarMax:1996
Banking industry (United Kingdom)	Direct banking *Telephone banking *PC banking *Online banking	First Direct: *October 1989 *May 1996 *Summer 1997
General-insurance industry (United Kingdom)	Direct banking *Direct motor insurance *Direct home insurance	Direct Line Insurance: *April 1985 *Fall 1993
Life insurance and pensions industry (United Kingdom)	Direct life insurance and personal pensions	Virgin Direct: June 1996
Airline industry (Europe)	Low-cost, no-frills, point-to point airline service	Pyanair: 1991 (routes between United Kingdom and Ireland only) easy Jet: November 1995
Retail supermarket industry (United Kingdom)	Home delivery of grocery services Online home delivery of grocery services	Food ferry, Teleshop: early 1990s (London area only) Tesco direct: 1998 (now part of tesco.com,

		launched in 2000)
Stock exchanges (Europe and North America)	Electronic communications networks (ECNs)	OM Exchange: 1984 (Recently, new ECNs such as Instinet, Island ECN and OptiMark were introduced in European and North American exchanges.)

Source: (Charitou &Markides, 2003)

In addition to the above strategic innovation examples presented by Charitou & Markides (2003), we introduce some other examples of strategic innovations in table (2.9)

Table (2.9): Additional examples of Strategic Innovations

Industry	**Strategic Innovation**	**Innovators**
Computers Manufacturing	Making personal computers for individuals at a time when computers were used by corporations, scientific establishments, educational institutes and governments.	Apple
Selling Hardware	Moving into supplying total business solutions	IBM
furniture retail	Using standardization (making one type of a product) as a route to become the world's largest furniture retailer.	Ikea
Music Players Industry	iPod & iTunes	Apple
Online search	Fast & Total Online search engine	Google
T-Shirt design	Forming a community of registered internet members with a valid e-mail address. Members of the community—largely artists— upload hundreds of T-shirt designs to the community site. Visitors to the site then vote for their favorite designs by scoring them on a scale of 0 to 5. From the scoring, the best designs were chosen from the hundreds of submissions.	Threadless in Chicago

2.3 ICT Firms in Gaza Strip

The Palestinian private Information and Communications Technology (ICT) sector is organized and governed by a strong established ICT association: the Palestinian IT Association of companies (PITA). (PITA, 2013).

PITA has a vibrant advocacy policy to positively affect and influence government's ICT regulations. PITA also has open communication channels with different key decision makers and major stakeholders in the Palestinian community to help advance the ICT sector. (PITA, 2013)

The Information and Communications Technology (ICT) sector has had a significant influence on the development of Palestine's infrastructure, quality of life, state of education, recognition of its rich, cultural history, and the emergence of its startup economy. (PITA, 2013).

As of 2007 year end, ICT sector contributed about 10-12% of the GDP with a market size of around $500 million, with approximately 250 ICT companies. Palestinian ICT companies cover wide spectrum of the ICT market including hardware distributors, software development firms, office automation vendors, and internet service providers, and telecommunications companies, ICT consulting and training companies. (PITA, 2013).

PITA Strategy for ICT sector

Moving forward, PITA's strategy for 2012 - 2015 is to enhance the external business environment by developing the regulatory process and fighting monopolistic activities in support of open, transparent and competitive market. (PITA, 2013).

ICT Economic Information

According to Pita (2013), the ICT sector has the following economic characteristics:

- ICT Sector Growth rate 8% in 2009 and 10% in 2010.
- ~530M$ Economic value – added.
- ~8% contribution to the national GDP.
- Expected growth to 10% of GDP

ICT in Education and Employment

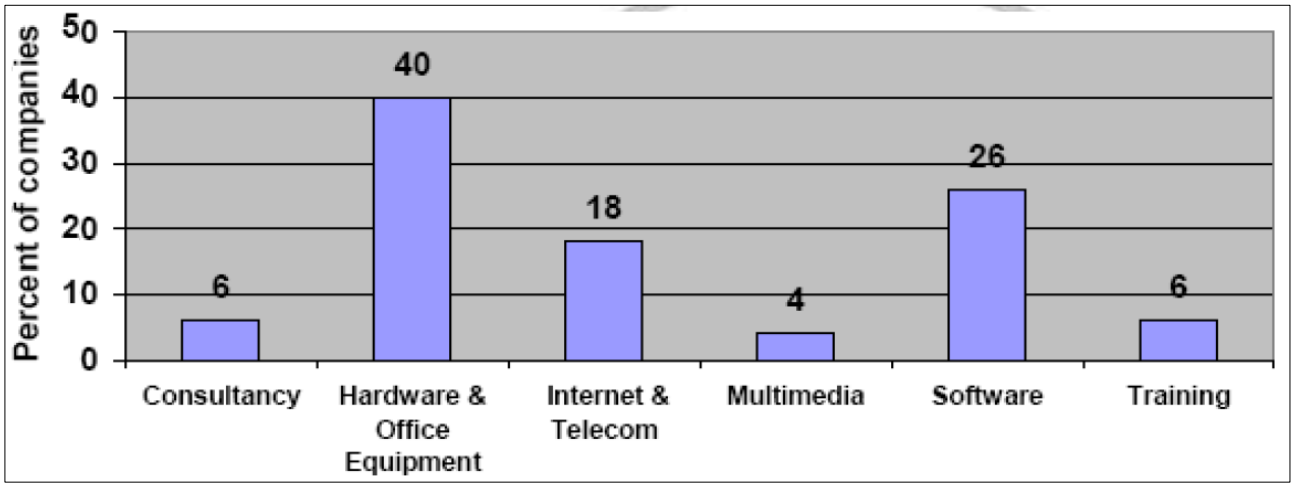
According to Pita (2013), the ICT sector has the following Educational and Employment characteristics:

- ~8000 students in ICT, 2500 yearly graduates.
- 13 Palestinian Universities teach ICT related fields.
- 5000 direct employees, 15,000 indirect employees.

ICT firms Specializations

As figure (2.4) shows the ICT sector provides multiple products, where the major proportion is 40% for Hardware and Office Equipment, 26% for Software, 18% for Internet and Telecom, 6% for Consultancy, 6% for Training and 4% for Multimedia. (Wihaidi, R., 2009).

Figure: (2.4) Distribution of PITA Member Companies by Specialization



Source: (Wihaidi, R., 2009)

ICT firms Infrastructure

The infrastructure of ICT companies is based on the following technologies: (PITA, 2013)

- Internet is provided through different main internet providers with backbone from Jordan, Egypt, and UK.
- Fiber Optics.
- Symmetrical and asymmetrical DSL.
- Microwave connectivity from Israel and Jordan.

Palestine ICT Companies Partnerships

ICT companies have partnerships and relationships with many associations outside Palestine. (PITA, 2013).

- 50% of companies have partnerships outside Palestine.
- 30% are exporting services and products.
- Major joint R&D projects include CISCO, Intel, HP & Microsoft.
- International markets include USA, Europe, Canada, ME and the gulf.

Gaza Strip, as a part of Palestine has 46 members in PITA, distributed on different business activities, including: (Computer Programming, Mobile Applications Development, Software, Telecoms, Wireless & Satellite Telecoms …). A list of PITA members in Gaza Strip is shown in Appendix B.

2.4 Summary

This chapter presented theoretical basis of what SISP and Strategic Innovation mean. It mainly focused on the SISP definitions, objectives, dimensions, approaches, success factors and barriers in addition to strategic innovation definitions, dimensions, success factors and barriers. Also this chapter included definition of ICT as business activity and illustrated the Palestinian ICT sector historically and economically with some statistics in addition to the characteristics of ICT sector.

As clear in this chapter, the ICT sector has great potentials to strongly contribute to the Palestinian economy, which assures the importance of this sector and the increasing level of competition due to the development of technology. That's why ICT managers should be aware about the role of SISP and strategic innovation; and this is what our study trying to show.

CHAPTER THREE

METHODOLOGY

This chapter consists of the following sections:

3.1 Introduction

This chapter describes the methodology that was used in this research. The adopted methodology to accomplish this study uses the following techniques: the information about the research design, research population, questionnaire design, statistical data analysis and content validity.

3.2 Research Design

To accomplish the research objectives specified in chapter 1, this study was conducted in five phases.

The first phase of the research thesis proposal included identifying and defining the problems and establishment objective of the study and development research plan.

The second phase of the research included the relevant literature on SISP and Strategic Innovation. Based on the literature review results, related hypotheses were produced.

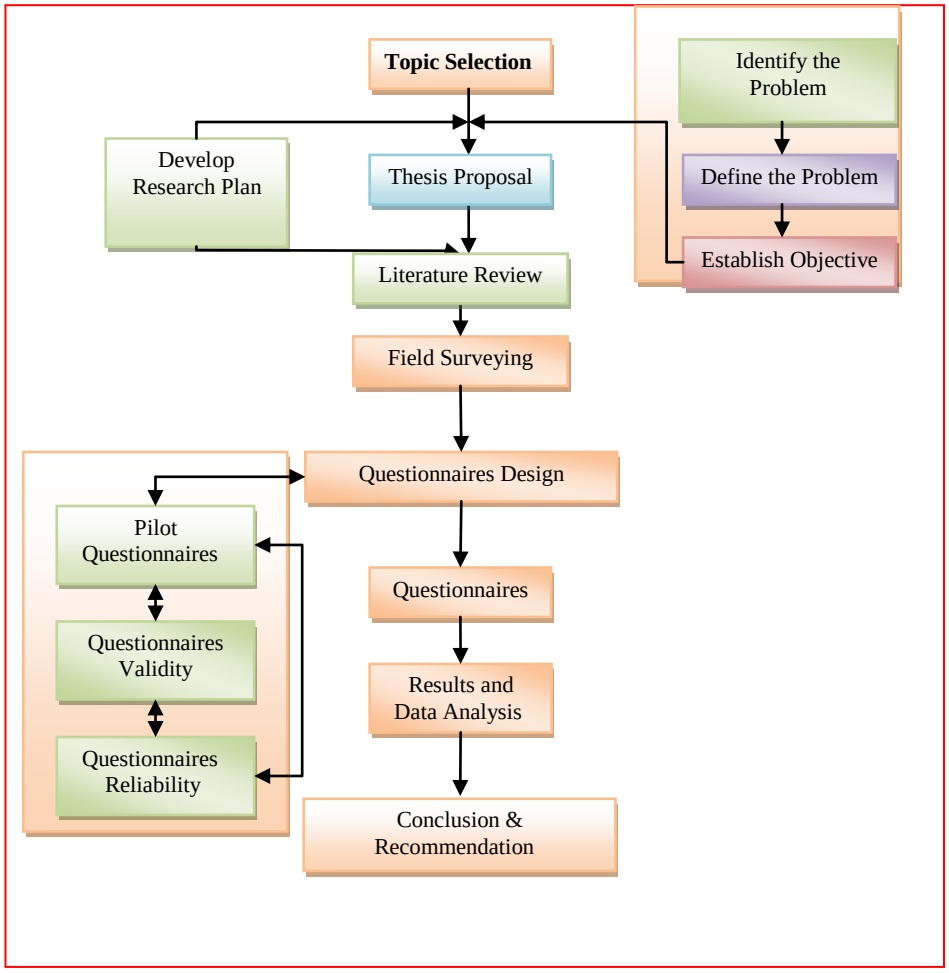
The third phase included a field survey which was cconducted with the ICT firms managers and academic doctors in order to judge the questionnaire.

The fourth phase focused on distributing the questionnaire. This questionnaire was used to collect the required data in order to achieve the research objective.

The fifth phase of the research was data analysis and discussion. Statistical Package for the Social Sciences, (SPSS) was used to perform the required analysis. The final phase includes the conclusions and recommendations.

Figure (3.1) shows the methodology flowchart, which leads to achieve the research objectives.

Figure (3.1): Methodology Flowchart



3.3 Research Methodology

3.3.1 Data Collection

As the study follows the analytical descriptive methodology, different tools to collect primary and secondary data were utilized as follows:

3.3.1.1 Secondary data

To introduce the theoretical literature of the subject, the researcher used different sources of data including books and references in both English and Arabic about SISP and Strategic Innovations. Also, he used Periodicals, published papers and articles. Reports and web sites were also used.

3.3.1.2 Primary data

To collect the primary data of the research, a questionnaire was developed from the variables of the study and with the help of previous studies, and then it was distributed to the sample of the study.

3.3.2 Population

The population includes the managers of ICT firms in Gaza Strips registered in the Palestinian IT Association of companies (PITA), which are 46 managers. And because the size of the population is small, the researcher used the full survey.

3.3.3 Questionnaire Design and Content

According to the review of literature and after interviewing experts (Appendix C), the study tool was developed; a questionnaire was designed in the Arabic language (Appendix D), with English version attached in (Appendix E). The questionnaire was provided with a covering letter which explained the purpose of the study, the aim of the research and the security of the information in order to encourage high response. This questionnaire consisted of three parts:

Part one: Included the personal and company Information.

Part two: Included the success factors of SISP.

Part three: Included the level of strategic innovation.

3.3.4 Questionnaire distribution

The researcher prepared an online questionnaire, and sent it by email to the companies and he used telephone to contact with the companies to assure the return of the questionnaire. And some companies needed a visit. This took place during 2 months -November & December, 2013.

3.4 Pilot Study

A pilot study for the questionnaire was conducted before distributing the questionnaire to all of the study population. During October, 2013 the questionnaire was distributed to 20 ICT managers, the returned questionnaires were verified and statistically assured they were designed well enough to provide relations and tests among variables; in addition, these questionnaires were used in the analysis, because the size of the population is small.

3.5 Data Measurement

In order to be able to select the appropriate method of analysis, the level of measurement must be understood. For each type of measurement, there is/are an appropriate method /s that can be applied and not others. In this research, numerical scale 1-10 is used, where "1" indicates a weak answer while "10" indicates a strong answer.

3.6 Test of Normality for each field:

Table (3.1) shows the results for Kolmogorov-Smirnov test of normality. From Table (3.1), the p-value for each field is greater than 0.05 level of significance, then the distribution for each field is normally distributed. Consequently, Parametric tests will be used to perform the statistical data analysis. Person-Organization Fit

Table (3.1): Kolmogorov-Smirnov test

Field	Kolmogorov-Smirnov	
	Statistic	P-value
Success Factors of SISP	0.745	0.636
Level of Strategic Innovation	0.627	0.827
All paragraphs of the questionnaire	0.473	0.979

3.7 Statistical analysis Tools

Both qualitative and quantitative data analysis methods would be used. The Data analysis will be made utilizing (SPSS 20). The researcher would utilize the following statistical tools:

1) Kolmogorov-Smirnov test of normality.
2) Pearson correlation coefficient for Validity.
3) Cronbach's Alpha for Reliability Statistics.
4) Frequency and Descriptive analysis.
5) Parametric Tests (One-sample T test, Independent Samples T-test , Analysis of Variance).

T-test is used to determine if the mean of a statement is significantly different from a hypothesized value 6 (Approximately the middle value of numerical scale 1-10). If the P-value (Sig.) is smaller than or equal to the level of significance, $\alpha = 0.05$, then the mean of a statement is significantly different from a hypothesized value 6. The sign of the Test value indicates whether the mean is significantly greater or smaller than hypothesized value 6. On the other hand, if the P-value (Sig.) is greater than the level of significance, $\alpha = 0.05$, then the mean a statement is insignificantly different from a hypothesized value 6.

The *Independent Samples T-test* is used to examine if there is a statistical significant difference between two means among the respondents toward the Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation due to (Number of Employees, Gender, Educational Attainment and Total years of Experience).

The *One- Way Analysis of Variance (ANOVA)* is used to examine if there is a statistical significant difference between several means among the respondents toward the Implications

of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation due to (Company Age, Age, Field of Specialization and Years of Experience in current position)

3.8 Validity of Questionnaire

Validity refers to the degree to which an instrument measures what it is supposed to be measuring (Pilot and Hungler,1985). Validity has a number of different aspects and assessment approaches. Statistical validity is used to evaluate instrument validity, which include internal validity and structure validity.

3.8.1 Internal Validity

Internal validity of the questionnaire is the first statistical test that used to test the validity of the questionnaire.

Table (3.2) clarifies the correlation coefficient for each paragraph of the "Top management support" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.2): Correlation coefficient of each paragraph of "Top management support" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	Top management sets the overall direction of IS Planning.	.750	0.000*
2.	Top management participates actively in SISP.	.644	0.000*
3.	Top management assigns and sits in IS steering committee meetings.	.745	0.000*
4.	Top management helps in resolving problems encountered by the steering committee of SISP.	.757	0.000*
5.	Top management provides the necessary resources (manpower & budget) for SISP process.	.888	0.000*
6.	Top management follows up the preparation and implementation of SISP.	.817	0.000*
7.	Top management educates employees about the importance of SISP.	.864	0.000*

* Correlation is significant at the 0.05 level

Table (3.3) clarifies the correlation coefficient for each paragraph of the " Clear-cut corporate plan " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.3): Correlation coefficient of each paragraph of "Clear-cut corporate plan" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The strategic plan of the organization defines the role IT should play.	.833	0.000*
2.	The organization has a defined scope of the IS planning process.	.834	0.000*
3.	The scope of SISP is limited to real business needs.	.827	0.000*
4.	There is a strong linkage between Organization's corporate objectives and its IS objectives.	.776	0.000*
5.	There is a good fit between corporate strategic plan and the IS plan.	.810	0.000*
6.	IS planners deconstruct a business enterprise into processes and determine if they are adequately supported by the existing systems.	.702	0.000*
7.	IS Planners understand the organization's culture and goals.	.753	0.000*
8.	IS systems which don't align with business needs are upgraded or replaced.	.513	0.000*

* Correlation is significant at the 0.05 level

Table (3.4) clarifies the correlation coefficient for each paragraph of the " Good user-IS relationships " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.4): Correlation coefficient of each paragraph of " Good user-IS relationships " and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	There is a good communication between IS staff and employees (users).	.723	0.000*
2.	The framework for the effective user-IS relationships starts with top management.	.717	0.000*
3.	There is a formally appointed liaison officer whose task is to link the IS department with other departments.	.738	0.000*
4.	Top management takes the lead in bridging the gap between business and IS staff.	.730	0.000*
5.	Users in organization are educated about the role and potential of IT.	.820	0.000*
6.	There is a good partnership between business and IT staff.	.606	0.000*
7.	Users are made to feel part of the change brought about by IS planning.	.659	0.000*

* Correlation is significant at the 0.05 level

Table (3.5) clarifies the correlation coefficient for each paragraph of the "Qualified personnel" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.5): Correlation coefficient of each paragraph of "Qualified personnel" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The Organization relies on a pool of sufficiently qualified IS personnel.	.636	0.000*
2.	The Organization uses outside experts in preparing its IS plans.	.444	0.002*
3.	The Organization uses inside experts to prepare IS plans because they are familiar with company culture and objectives.	.594	0.000*
4.	Software/hardware vendors are important elements in IS planning.	.497	0.000*
5.	The organization provides training for employees in order to improve their capabilities in IT.	.790	0.000*

* Correlation is significant at the 0.05 level

Table (3.6) clarifies the correlation coefficient for each paragraph of the "Anticipating likely changes in IT" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.6): Correlation coefficient of each paragraph of "Anticipating likely changes in IT" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	The organization identifies new technologies in the field of Information Systems and be proactive to it.	.771	0.000*
2.	The infrastructure and IS environment in the Organization are flexible so that they can support any IT developments.	.791	0.000*
3.	IS planners depend on vendors to keep them informed of new advances in IT.	.669	0.000*
4.	New innovative products by other vendors of the Organization are taken in consideration.	.787	0.000*
5.	IS planners identify new technologies and assimilate it into the organization.	.702	0.000*
6.	The organization encourages employees to keep up with what's new in IS.	.670	0.000*
7.	The company provides sufficient budget for research and development in the field of information technology.	.747	0.000*

* Correlation is significant at the 0.05 level

Table (3.7) clarifies the correlation coefficient for each paragraph of the " Clear, concise and formal planning procedures " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.7): Correlation coefficient of each paragraph of " Clear, concise and formal planning procedures " and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	There are formal IS planning procedures for the process of IS planning.	.823	0.000*
2.	The Organization has a clear and concise IS planning procedure that divides the IS Planning process into distinct stages.	.878	0.000*
3.	IS planning is carried out systematically involving all major stakeholders.	.899	0.000*
4.	The organization prioritizes IS projects in terms of their strategic value.	.836	0.000*
5.	Procedure or Methodology used in IS planning in The Organization depends on the need of the organization.	.680	0.000*

* Correlation is significant at the 0.05 level

Table (3.8) clarifies the correlation coefficient for each paragraph of the " Free communication and commitment to change " and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.8): Correlation coefficient of each paragraph of "Free communication and commitment to change" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
1.	IS Planning affects people both within and outside the IS function in The Organization.	.640	0.000*
2.	IS planners keep people inside the organization informed of their actions and decisions.	.697	0.000*
3.	Top management in the organization works to change the perception that the IS department is an insulated department, far removed from the others.	.559	0.000*
4.	Top management encourages free communication inside the organization.	.571	0.000*
5.	Top management encourages commitment to change throughout the organization.	.632	0.000*
6.	Communication within the organization provides an effective way to identify suitable strategic IT applications.	.656	0.000*
7.	IS planners recognize that the success of the IS planning process relies ultimately on its understanding and acceptance by the people inside the organization.	.541	0.000*

* Correlation is significant at the 0.05 level

Table (3.9) clarifies the correlation coefficient for each paragraph of the "Level of Strategic Innovation" and the total of the field. The p-values (Sig.) are less than 0.05, so the correlation coefficients of this field are significant at $\alpha = 0.05$, so it can be said that the paragraphs of this field are consistent and valid to be measure what it was set for.

Table (3.9): Correlation coefficient of each paragraph of "Level of Strategic Innovation" and the total of this field

No.	Paragraph	Pearson Correlation Coefficient	P-Value (Sig.)
	Managed Innovation Process		
1.	Organization's approach to strategy goes beyond traditional planning methods.	.843	0.000*
2.	Organization's approach to new product development goes beyond traditional planning methods.	.909	0.000*
3.	The organization takes an exploratory approach that focuses internally and externally as well.	.943	0.000*
4.	Organization's approach to strategy challenges the status quo and creatively inspires new thinking.	.731	0.000*
	Strategic Alignment		
1.	Organization's Leadership supports (and actively drives) a collaborative culture.	.964	0.000*
2.	Top management encourages different departments working cross-functionally to identify and develop innovative solutions.	.957	0.000*
	Industry Foresight		
1.	The organization has a systematic process for actively monitoring and exploring emerging trends	.936	0.000*
2.	The organization develops alternative scenarios that represent either threats or opportunities.	.897	0.000*
	Consumer/Customer Insight		
1.	The organization directly involves consumers/customers (both existing and potential) as an integral part of the innovation process	.954	0.000*
2.	The organization seeks identifying and meeting its consumers/customers (both existing and potential) needs.	.936	0.000*
	Core Technologies and Competencies		
1.	The organization clearly understands its core competencies.	.842	0.000*
2.	The organization has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term technology strategies.	.852	0.000*
3.	The organization has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term R&D investments.	.937	0.000*
4.	The organization actively explores new ways to extend beyond its existing competencies.	.901	0.000*
	Cultural Readiness		
1.	The organization demonstrates an innovative mindset.	.868	0.000*
2.	The organization demonstrates a bias for collaboration and team work.	.865	0.000*
3.	The organization demonstrates an inclusive decision-making style.	.874	0.000*
4.	The organization demonstrates a willingness to embrace change, and a penchant for action.	.817	0.000*

Process and Structural Readiness			
1.	The organization has the readiness for developing appropriate operational processes.	.855	0.000*
2.	The organization has the readiness for developing appropriate functional structures.	.894	0.000*
3.	The organization allocates adequate staffing to high priority innovation initiatives.	.840	0.000*
4.	The organization allocates adequate funding to high priority innovation initiatives.	.910	0.000*
Disciplined Implementation			
1.	The organization consistently demonstrates its ability to create measurable business impact	.968	0.000*
2.	The organization takes a disciplined approach to the implementation of strategic thinking.	.974	0.000*
Capacity for Sustainable Innovation			
1.	The organization takes the time to learn from its previous innovation efforts.	.913	0.000*
2.	The organization is committed to deliberately building an innovation-based culture.	.957	0.000*
3.	The organization is instituting a set of innovation-focused methodologies.	.884	0.000*

* Correlation is significant at the 0.05 level

3.8.2 Structure Validity

Structure validity is the second statistical test that used to test the validity of the questionnaire structure by testing the validity of each field and the validity of the whole questionnaire. It measures the correlation coefficient between one field and all the fields of the questionnaire that have the same level of liker scale.

Table (3.10) clarifies the correlation coefficient for each field and the whole questionnaire. The p-values (Sig.) are less than 0.05, so the correlation coefficients of all the fields are significant at $\alpha = 0.05$, so it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

Table (3.10): Correlation coefficient of each field and the whole of questionnaire

No.	Field	Pearson Correlation Coefficient	P-Value (Sig.)
	Success Factors of SISP	**.948**	**0.000***
1.	Top management support	.882	0.000*
2.	Clear-cut corporate plan	.909	0.000*
3.	Good user-IS relationships	.793	0.000*
4.	Qualified personnel	.760	0.000*
5.	Anticipating likely changes in IT	.836	0.000*
6.	Clear, concise and formal planning procedures	.834	0.000*
7.	Free communication and commitment to change	.797	0.000*
	Level of Strategic Innovation	**.840**	**0.000***
1.	Managed Innovation Process	.752	0.000*
2.	Strategic Alignment	.747	0.000*
3.	Industry Foresight	.515	0.000*
4.	Consumer/Customer Insight	.688	0.000*
5.	Core Technologies and Competencies	.872	0.000*
6.	Cultural Readiness	.865	0.000*
7.	Process and Structural Readiness	.872	0.000*
8.	Disciplined Implementation	.799	0.000*
9.	Innovation Goals and Metrics	.702	0.000*
10.	Capacity for Sustainable Innovation	.873	0.000*

* Correlation is significant at the 0.05 level

3.9 Reliability of the Research

The reliability of an instrument is the degree of consistency which measures the attribute; it is supposed to be measuring (Pilot & Hunger, 1985). The less variation an instrument produces in repeated measurements of an attribute, the higher its reliability. Reliability can be equated with the stability, consistency, or dependability of a measuring tool. The test is repeated to the same sample

of people on two occasions and then compares the scores obtained by computing a reliability coefficient (Pilot & Hunger, 1985).

Cronbach's Coefficient Alpha

This method is used to measure the reliability of the questionnaire between each field and the mean of the whole fields of the questionnaire. The normal range of Cronbach's coefficient alpha value between 0.0 and + 1.0, and the higher values reflects a higher degree of internal consistency. The Cronbach's coefficient alpha was calculated for each field of the questionnaire.

Table (3.11) shows the values of Cronbach's Alpha for each field of the questionnaire and the entire questionnaire. For the fields, values of Cronbach's Alpha were in the range from 0.425 and 0.961. This range is considered high; the result ensures the reliability of each field of the questionnaire. Cronbach's Alpha equals 0.970 for the entire questionnaire which indicates an excellent reliability of the entire questionnaire.

Table (3.11): Cronbach's Alpha for each field of the questionnaire

No.	Field	Cronbach's Alpha
	Success Factors of SISP	**0.893**
1.	Top management support	0.888
2.	Clear-cut corporate plan	0.829
3.	Good user-IS relationships	0.425
4.	Qualified personnel	0.844
5.	Anticipating likely changes in IT	0.885
6.	Clear, concise and formal planning procedures	0.710
7.	Free communication and commitment to change	0.953
	Level of Strategic Innovation	**0.879**
1.	Managed Innovation Process	0.915
2.	Strategic Alignment	0.801
3.	Industry Foresight	0.875
4.	Consumer/Customer Insight	0.903
5.	Core Technologies and Competencies	0.866
6.	Cultural Readiness	0.894
7.	Process and Structural Readiness	0.937
8.	Disciplined Implementation	0.903
9.	Innovation Goals and Metrics	-
10.	Capacity for Sustainable Innovation	0.961
	All paragraphs of the questionnaire	**0.970**

The Thereby, it can be said that the researcher proved that the questionnaire was valid, and reliable.

CHAPTER FOUR

Data Analysis and Discussion

This chapter consists of the following sections:

4.1 Discussion of General Information

4.2 Discussion of Success Factors of SISP

4.3 Discussion of the Level of Strategic Innovation

4.4 Discussion of Research Hypothesis

4.1 Analysis of General Information

4.1.1 Personal Information

4.1.1.1 Age

Table No. (4.1) shows that 7.1% of the respondents have ages "Less than 25 years ", 14.3% of the respondents have ages between "25 to less than 30 ", 45.2% of the respondents have ages between "30 to less than 40 ", 28.6% of the respondents have ages between "40 to less than 50 " and 4.8% of the respondents have ages of "50 Years and more ". The findings show that 45.2% of the sample is 30 to 40 years old, which reflects that company managers are young (youth age) and may reflects the short age of these companies. Also, it is noticed that about 7.1% of the managers are less than 25 years old, which may reflect the nature of these companies as family companies or the short age of these companies. This result (managers youth age) means that those managers are familiar with new technologies as they grow up in the age of IT. This gives a good contribution to our study.

Table (4.1): Age

Age	Frequency	Percent
Less than 25	3	7.1
25 to less than 30	6	14.3
30 to less than 40	19	45.2
40 to less than 50	12	28.6
50 Years and more	2	4.8
Total	42	100.0

4.1.1.2 Gender

Table No. (4.2) shows that the majority of the respondents are males and this represents 90.5% of the study sample and 9.5% are Females. This may reflect the nature of the Palestinian society as most leaders are men, or this may reflect that employment rate of men is higher than women employment rate.

Table (4.2): Gender

Gender	Frequency	Percent
Male	38	90.5
Female	4	9.5
Total	42	100.0

4.1.1.3 Educational Attainment

Table No. (4.3) shows that 76.2% of the respondents hold " Bachelor ", 19.0% " Master degree" and 4.8% of the sample hold " P.h.D" . This result may be justified as most managers are enough with Bachelor degree, while other managers have more ambitions towards the high degrees as master and PHD. This is still in the normal conditions as the majority of educated people have bachelor degrees, while some of them have higher degrees.

Table (4.3): Educational Attainment

Educational Attainment	Frequency	Percent
Secondary or less	-	-
Diploma	-	-
Bachelor degree	32	76.2
Master	8	19.0
P.H.D	2	4.8
Total	42	100.0

4.1.1.4 Field of Specialization

Table No. (4.4) shows that 38.1% of the respondents have Field of Specialization of " Engineering (Computer/ Telecom)", 40.5% have Field of Specialization of "IT", and 21.4% have Field of Specialization of "Commerce/ Business Administration ".

The findings show that majority of managers specializations are related to ICT (78.5% engineering and IT), which aligns with the nature of the companies. As the experience of the manager plays an important role.

Table (4.4): Field of Specialization

Field of Specialization	Frequency	Percent
Engineering (Computer/ Telecom)	16	38.1
IT	17	40.5
Commerce/ Business Administration	9	21.4
Total	42	100.0

4.1.1.5 Total years of Experience

Table No.(4.5) shows that 2.4% of the respondents have experience " Less than 3 years", 11.9% have experience "3 – Less than 6 years ", 21.4% have experience "6- less than 10 years " and 64.3% of the respondents have experience "10 years and more " . The results show that the majority of the managers 64.3% have experience more than 10 years, and this gives a good contribution to this research since there answers are more reliable.

Table (4.5): Total years of Experience

Total years of Experience	Frequency	Percent
Less than 3 year	1	2.4
3 – Less than 6 years	5	11.9
6- less than 10 years	9	21.4
10 years and more	27	64.3
Total	42	100.0

4.1.1.6 Years of Experience in current position

Table No.(4.6) shows that 14.3% of the respondents have experience in current position " Less than 3 years", 28.6% have experience "3 – Less than 6 years ", 26.2% have experience "6- less than 10 years " and 31.0% of the respondents have experience in current position "10 years and more " . The findings show that the surveyed managers' experience in current positions is variable, and this may reflect that there are promotions in most of the companies. Also, 31% of managers have more than 10 years in the current position which may give good contribution to this research.

Table (4.6): Years of Experience in current position

Years of Experience in current position	Frequency	Percent
Less than 3 year	6	14.3
3 – Less than 6 years	12	28.6
6- less than 10 years	11	26.2
10 years and more	13	31.0
Total	42	100.0

4.1.2 Company Information

4.1.2.1 Company Age

Table No.(4.7) shows that 26.2% of the respondents have company ages "Less than 5 ", 28.6% of the respondents have company ages between "5 to less than 10 ", 23.8% of the respondents have company ages between "10 to less than 15 and 21.4% of the respondents have company ages of "15 Years and more ". The results show that 54.8% of the companies have age less than 10 years, which reflects that majority of ICT companies are new. And 78.6% of companies ages are less than 15 years; this means that these companies were established with the start of the age of the IT & Telecoms revolution.

Table (4.7): Company Age

Company Age	Frequency	Percent
Less than 5	11	26.2
5 to less than 10	12	28.6
10 to less than 15	10	23.8
15 Years and more	9	21.4
Total	42	100.0

4.1.2.2 Number of employees

Table No. (4.8) shows that 38.1% from the companies have less than 10 employees, 28.6% from the companies have between 10 to less than 20 employees, 19.0% from the companies have between 20 to less than 40 employees, 0% from the companies have between 40 to less than 60 employees, 7.1% from the companies have between 60 to less than 80 employees, 4.8% from the companies have between 80 to less than 100 employees and 2.4% from the companies have more than 100 employees. The results show that the majority of companies (85.7%) have less than 40 employees. This reflects the small size of the ICT sector companies in Gaza Strip, and this may be due to the small market and the siege that Gaza is suffering from.

Table (4.8): Number of employees

Number of employees	Frequency	Percent
Less than 10	16	38.1
10 to less than 20	12	28.6
20 to less than 40	8	19.0
40 to less than 60	-	-
60 to less than 80	3	7.1
80 to less than 100	2	4.8
100 and more	1	2.4
Total	42	100.0

4.2 Analysis of Success Factors of SISP:

4.2.1 Top management support

Table (4.9) shows the following results:

- The mean of paragraph #2 "Top management participates actively in SISP" equals 8.43 (84.29%), Test-value = 10.06, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. The researcher concludes that the respondents agreed to this paragraph which has the highest agreement level, which reflects that top management is guiding the IS planning process and this may reflect the central management style.

- The mean of paragraph #3 "Top management assigns and sits in IS steering committee meetings" equals 7.19 (71.90%), Test-value = 3.36, and P-value = 0.001 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this

paragraph but with the lowest agreement level. ICT companies are recommended to assign specified staff for the IS planning process in order to get suitable systems.

- The mean of the field "Top management support" equals 7.98 (79.81%), Test-value = 8.56, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of "Top management support ". Which means that top management in ICT companies are supporting the IS planning and that they recognize the role of this in achieving business goals. This result is supported by the following previous studies:

1. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Results showed that top management support (mean 4.69 out of 5) was the top success factor of SISP.
2. (H.M. Ramadan, Y.I. Taha and S.A. Al-Hudaif, 2007); this study aimed at presenting a practical methodology for developing information technology (IT) strategic plans that were designed and implemented successfully in the context of the Saudi Arabian Ministry of Transport IT strategic planning project. The study recommends that decision makers and managers should support the change towards aligning information systems and ministry goals.
3. (Yang, J., Tanner, K., Kuzic, J., 2011); this study aimed to identify enablers of SISP in an organization; the results showed that the most important enabler was the high level of recognition, participation and support of top management and executive committees.
4. (Hovelja, T. et al, 2010); this study aimed to identify the success factors of SISP. The results show that top management commitment and involvement is an important SISP success factor.

On the other hand, this result is inconsistent with other previous studies:

1. (Spremic,M., Strugar, I., 2002); This study aimed to identify the SISP practices in Croatia. The findings indicate the existence of a problem which is neglecting the challenging role of IT as a competitive resource, and that comes from lack of knowledge and interest in IT from top management structures of Croatian corporations. One reason for this inconsistency is that; this article had been conducted on year 2002, where the realization of SISP importance was not big.

2. (El-Kourd, H., 2007); this study found that the lack of support of top management prevents banks from evaluating their IT investments. In my opinion, this inconsistency was due to the year of conducting this study (2007).

Table (4.9): Means and Test values for "Top management support"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Top management sets the overall direction of IS Planning.	8.36	83.57	8.59	0.000*	2
2.	Top management participates actively in SISP.	8.43	84.29	10.06	0.000*	1
3.	Top management assigns and sits in IS steering committee meetings.	7.19	71.90	3.36	0.001*	7
4.	Top management helps in resolving problems encountered by the steering committee of SISP.	7.88	78.81	6.01	0.000*	6
5.	Top management provides the necessary resources (manpower & budget) for SISP process.	8.07	80.71	6.43	0.000*	3
6.	Top management follows up the preparation and implementation of SISP.	8.02	80.24	7.00	0.000*	4
7.	Top management educates employees about the importance of SISP.	7.90	79.05	6.84	0.000*	5
	All paragraphs of the field	7.98	79.81	8.56	0.000*	

* The mean is significantly different from

4.2.2 Clear-cut corporate plan

Table (4.10) shows the following results:

- The mean of paragraph #7 "IS Planners understand the organization's culture and goals" equals 8.23 (82.31%), Test-value = 9.43, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. The researcher concludes that the respondents agreed to this paragraph. This result shows that IS planners understand the culture and the objectives of the organization, which helps them to know what they really need to do.

- The mean of paragraph #6 "IS planners deconstruct a business enterprise into processes and determine if they are adequately supported by the existing systems" equals 7.54 (75.37%), Test-

value = 5.04, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this paragraph but with the lowest agreement level. So, IS planners need to focus more on the process re-engineering to make sure that these processes are supported by current information systems.

- The mean of the field "Clear-cut corporate plan" equals 7.88 (78.81%), Test-value = 9.74, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of "Clear-cut corporate plan ". This result shows that ICT companies are aligning their IS plans with the goals and objectives of these companies. This result agrees with the following studies:

1. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Results show that a Clear-cut corporate plan (mean 4.41 out of 5) comes as the second top success factor of SISP.
2. (H.M. Ramadan, Y.I. Taha and S.A. Al-Hudaif, 2007); this study aimed at presenting a practical methodology for developing information technology (IT) strategic plans that were designed and implemented successfully in the context of the Saudi Arabian Ministry of Transport IT strategic planning project. The study recommends that it is necessary to prepare an action plan to develop IS, which contains details and time lines of implementation of strategic information systems plan.
3. (Wilkin, C., L., Cerpa, N., 2012): The study aimed to investigate the practice and effectiveness of SISP as a function of strategic management in 29 large Australian organizations. The study found that there is a continued usage of SISP because of the need of strategic alignment of business and IT objectives.
4. (Yang, J., Tanner, K., Kuzic, J., 2011); this study aimed to identify enablers of SISP in an organization; the results showed that one of the enablers was the alignment and integration of all data, information and knowledge in the corporation.

However the study of (Hovelja, T. et al, 2010) which aimed to identify the success factors of SISP in Slovenian enterprises, found that there is no enough alignment of key internal/external business and IT strategies in these enterprises. One reason for this (according the findings of the study) may be the lack of teamwork between top and IT managers.

Table (4.10): Means and Test values for "Clear-cut corporate plan"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The strategic plan of the organization defines the role IT should play.	7.71	77.14	5.88	0.000*	6
2.	The organization has a defined scope of the IS planning process.	8.02	80.24	9.34	0.000*	2
3.	The scope of SISP is limited to real business needs.	7.83	78.29	7.01	0.000*	5
4.	There is a strong linkage between Organization's corporate objectives and its IS objectives.	7.93	79.27	7.35	0.000*	4
5.	There is a good fit between corporate strategic plan and the IS plan.	8.00	80.00	8.85	0.000*	3
6.	IS planners deconstruct a business enterprise into processes and determine if they are adequately supported by the existing systems.	7.54	75.37	5.04	0.000*	8
7.	IS Planners understand the organization's culture and goals.	8.23	82.31	9.43	0.000*	1
8.	IS systems which don't align with business needs are upgraded or replaced.	7.63	76.25	5.60	0.000*	7
	All paragraphs of the field	7.88	78.81	9.74	0.000*	

* The mean is significantly different from 6

4.2.3 Good user-IS relationships

Table (4.11) shows the following results:

- The mean of paragraph #6 "There is a good partnership between business and IT staff" equals 8.20 (81.95%), Test-value = 10.04, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this paragraph. This result shows the existence of a good relationship between IT people and other employees in the ICT companies.
- The mean of paragraph #3 "There is a formally appointed liaison officer whose task is to link the IS department with other departments" equals 6.68 (66.83%), Test-value = 1.64, and P-value = 0.055 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this paragraph is insignificantly different from the hypothesized value 6. We conclude that the respondents (Do not know, neutral) to this paragraph. This result show that there are no specific employees responsible

for the link between IS section and other sections. In my opinion, this can be due to the small size of ICT firms in Gaza Strip, where there is no need for such a position.

- The mean of the field "Good user-IS relationships" equals 7.61 (76.07%), Test-value = 7.46, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of "Good user-IS relationships ". This result shows that IT staff and IT systems are close and familiar to all employees in ICT companies. his result agrees with the following studies:

1. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Results showed that a Good user-IS relationships (mean 4.22 out of 5) was the third success factor of SISP.
2. (Yang, J., Tanner, K., Kuzic, J., 2011); this study aimed to identify enablers of SISP in an organization; the results showed that one of the enablers was the development of a more user-friendly SISP framework or architecture.
3. (Al-Hayali, A., Al-Murad, N., 2009); This study aimed to build a theoretical framework for the impact of the Indicators of the success of the management information system and their role in innovation in government and private banks in the city of Mosul, Iraq. The study found that the indicators of the system use and users conviction are important indicators in the measurement of the success of the Management Information System.

Table (4.11): Means and Test values for "Good user-IS relationships"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	There is a good communication between IS staff and employees (users).	8.00	80.00	7.77	0.000*	3
2.	The framework for the effective user-IS relationships starts with top management.	8.02	80.24	7.76	0.000*	2
3.	There is a formally appointed liaison officer whose task is to link the IS department with other departments.	6.68	66.83	1.64	0.055	7
4.	Top management takes the lead in bridging the gap between business and IS staff.	7.30	73.00	3.93	0.000*	5
5.	Users in organization are educated about the role and potential of IT.	7.74	77.38	5.74	0.000*	4
6.	There is a good partnership between business and IT staff.	8.20	81.95	10.04	0.000*	1
7.	Users are made to feel part of the change brought about by IS planning.	7.18	71.75	3.35	0.001*	6
	All paragraphs of the field	7.61	76.07	7.46	0.000*	

* The mean is significantly different from 6

4.2.4 Qualified personnel

Table (4.12) shows the following results:

- The mean of paragraph #1 "The Organization relies on a pool of sufficiently qualified IS personnel" equals 8.76 (87.62%), Test-value = 11.26, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6 .We conclude that the respondents agreed to this paragraph. This result shows that ICT companies hire qualified employees in the field of IT.

- The mean of paragraph #2 "The Organization uses outside experts in preparing its IS plans" equals 5.49 (54.88%), Test-value = -1.11, and P-value = 0.138 which is greater than the level of significance $\alpha = 0.05$. Then the mean of this paragraph is insignificantly different from the hypothesized value 6. We conclude that the respondents (Do not know, neutral) to this paragraph. This means that ICT firms depend on internal experts only. They are recommended to use outside experts in certain planning issues to improve the quality of the IS planning.

- The mean of the field "Qualified personnel" equals 7.66 (76.64%), Test-value = 9.40, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of "Qualified personnel ". This result shows that ICT companies are using qualified employees in their IT systems. This result agrees with the following studies:

1. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Results show that qualified personnel (mean 4.22 out of 5) is the fourth success factor of SISP.
2. (H.M. Ramadan, Y.I. Taha and S.A. Al-Hudaif, 2007); this study aimed at presenting a practical methodology for developing information technology (IT) strategic plans that were designed and implemented successfully in the context of the Saudi Arabian Ministry of Transport IT strategic planning project. The study recommends that it's necessary to support the IT center by qualified personnel in order for the IT center to be able to perform as needed. Also it's recommended to prepare training programs for the IT center employees.
3. (Basahel, A., Irani, Z., 2009); the study was based on a case study on X Airlines Company. The study found that X Airlines lacks skills in applying strategic planning techniques for its IS/IT activity. Therefore, X Airlines seeks consultants that have experience in conducting

such evaluations. However, X should form a team that understands the drivers of IS/IT strategic planning to deliver the information to the consultancy team and work alongside with it.

4. (Hovelja, T. et al, 2010); this study aimed to identify the success factors of SISP in Slovenian enterprises. The results show that end user training and quality of work of project teams are important SISP success factors.

Table (4.12): Means and Test values for "Qualified personnel"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The Organization relies on a pool of sufficiently qualified IS personnel.	8.76	87.62	11.26	0.000*	1
2.	The Organization uses outside experts in preparing its IS plans.	5.49	54.88	-1.11	0.138	5
3.	The Organization uses inside experts to prepare IS plans because they are familiar with company culture and objectives.	8.29	82.86	8.57	0.000*	2
4.	Software/hardware vendors are important elements in IS planning.	7.88	78.81	6.50	0.000*	4
5.	The organization provides training for employees in order to improve their capabilities in IT.	7.90	79.00	6.92	0.000*	3
	All paragraphs of the field	7.66	76.64	9.40	0.000*	

* The mean is significantly different from 6

4.2.5 Anticipating likely changes in IT

Table (4.13) shows the following results:

- The mean of paragraph #6 "The organization encourages employees to keep up with what's new in IS" equals 8.82 (88.21%), Test-value = 14.29, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this paragraph. This result shows that ICT firms recognize the rapidly developing nature of IT, so they encourage employees to be up-to-date with new changes.

- The mean of paragraph #7 "The company provides sufficient budget for research and development in the field of information technology" equals 6.83 (68.29%), Test-value = 2.38, and

P-value = 0.011 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6 .We conclude that the respondents agreed to this paragraph. This paragraph has the lowest agreement level. So, the ICT companies are recommended to spend more money for the development of their IT systems.

- The mean of the field "Anticipating likely changes in IT" equals 7.95 (79.47%), Test-value = 10.58, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of "Anticipating likely changes in IT ". This result shows that ICT firms in Gaza are up-to-date with technological changes in information systems. This result agrees with the following studies:

1. (Al-Shalabi, F., Bani-Hamdan, Kh., 2009); this study aimed to identify the impact of the use of information technology on the Organizational Innovation in the Central Electricity Generation Company in Jordan. It found that there is modern software. Also it found that the databases cover all company activities, and these databases are accurate and modern.
2. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Results show Anticipating likely changes in IT (mean 4.10 out of 5) is the fifth success factor of SISP.
3. (H.M. Ramadan, Y.I. Taha and S.A. Al-Hudaif, 2007); this study aimed at presenting a practical methodology for developing information technology (IT) strategic plans that were designed and implemented successfully in the context of the Saudi Arabian Ministry of Transport IT strategic planning project. The study recommends that it's important to prepare training programs for the IT center employees in order to be able to anticipate the developments in the IT field, also it's important that Information Systems should be aligned with new technologies.
4. (Yang, J., Tanner, K., Kuzic, J., 2011); this study aimed to identify enablers of SISP in an organization; the results showed that one of the enablers was understanding various internal and external environmental factors.
5. (Hovelja, T. et al, 2010); this study aimed to identify the success factors of SISP in Slovenian enterprises. The results show that the design and implementation of technical changes are important SISP success factors.

Table (4.13): Means and Test values for "Anticipating likely changes in IT"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	The organization identifies new technologies in the field of Information Systems and be proactive to it.	8.19	81.90	9.16	0.000*	2
2.	The infrastructure and IS environment in the Organization are flexible so that they can support any IT developments.	8.17	81.71	9.28	0.000*	4
3.	IS planners depend on vendors to keep them informed of new advances in IT.	7.62	76.19	5.60	0.000*	6
4.	New innovative products by other vendors of the Organization are taken in consideration.	7.98	79.75	7.76	0.000*	5
5.	IS planners identify new technologies and assimilate it into the organization.	8.19	81.90	10.13	0.000*	2
6.	The organization encourages employees to keep up with what's new in IS.	8.82	88.21	14.29	0.000*	1
7.	The company provides sufficient budget for research and development in the field of information technology.	6.83	68.29	2.38	0.011*	7
	All paragraphs of the field	7.95	79.47	10.58	0.000*	

* The mean is significantly different from 6

4.2.6 Clear, concise and formal planning procedures

Table (4.14) shows the following results:

- The mean of paragraph #5 "Procedure or Methodology used in IS planning in The Organization depends on the need of the organization" equals 7.93 (79.27%), Test-value = 7.93, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this paragraph. This result shows that the need of the ICT companies is the base of their IS procedures.

- The mean of paragraph #1 "There are formal IS planning procedures for the process of IS planning" equals 7.10 (70.95%), Test-value = 4.16, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6.We conclude that the respondents agreed to this

paragraph. This paragraph has the lowest agreement level. So, ICT firms need to identify specific procedures for the process of IS planning.

- The mean of the field "Clear, concise and formal planning procedures" equals 7.56 (75.61%), Test-value = 6.94, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of "Clear, concise and formal planning procedures ". This result shows that ICT companies have clear procedures for the IT systems. This result agrees with the following studies:

1. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Results show that Clear, concise and formal planning procedures (mean 4.05 out of 5) was the sixth success factor of SISP.
2. (H.M. Ramadan, Y.I. Taha and S.A. Al-Hudaif, 2007); this study aimed at presenting a practical methodology for developing information technology (IT) strategic plans that were designed and implemented successfully in the context of the Saudi Arabian Ministry of Transport IT strategic planning project. The study recommends the ministry to prepare an action plan for developing information systems in order to get details and time schedules for the implementation of the plan of IS.

However the study of (Hovelja, T. et al, 2010) which aimed to identify the success factors of SISP in Slovenian enterprises; found that these enterprises don't have Consistency of a priority list of IT projects for the realization of business strategies. On reason for this (according the findings of the study) may be the lack of teamwork between top and IT managers, which leads to non-clear IS priorities.

Also, the study of (El-Kourd, H., 2007) found that the banking sector in Palestine has some sort of formal procedures for evaluating IT investment. However, closer examination of the formal procedures revealed that these procedures are not precise and detailed ones. One reason for this is the year of conducting this study (2007).

Table (4.14): Means and Test values for "Clear, concise and formal planning procedures"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	There are formal IS planning procedures for the process of IS planning.	7.10	70.95	4.16	0.000*	5
2.	The Organization has a clear and concise IS planning procedure that divides the IS Planning process into distinct stages.	7.38	73.81	4.56	0.000*	4
3.	IS planning is carried out systematically involving all major stakeholders.	7.71	77.07	6.10	0.000*	2
4.	The organization prioritizes IS projects in terms of their strategic value.	7.71	77.07	5.92	0.000*	2
5.	Procedure or Methodology used in IS planning in The Organization depends on the need of the organization.	7.93	79.27	7.93	0.000*	1
	All paragraphs of the field	7.56	75.61	6.94	0.000*	

* The mean is significantly different from 6

4.2.7 Free communication and commitment to change

Table (4.15) shows the following results:

- The mean of paragraph #7 "IS planners recognize that the success of the IS planning process relies ultimately on its understanding and acceptance by the people inside the organization" equals 8.45 (84.52%), Test-value = 13.09, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this paragraph. This result shows that ICT firms realize the importance of the understanding and the acceptance of IT process in achieving successful systems.

- The mean of paragraph #3 "Top management in the organization works to change the perception that the IS department is an insulated department, far removed from the others" equals 7.21 (72.14%), Test-value = 3.79, and P-value = 0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of this paragraph is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to this paragraph. This paragraph has the lowest agreement level, which means that top management should exert more efforts in order to increase the cooperation between IT section and other sections.

- The mean of the field "Free communication and commitment to change" equals 7.56 (75.61%), Test-value = 6.94, and P-value=0.000 which is smaller than the level of significance

$\alpha = 0.05$. The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to field of "Free communication and commitment to change ". This result shows that ICT firms have accepted level of free communication and there exists a commitment to change. This result agrees with the following studies:

1. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Results show that Free communication and commitment to change (mean 4.02 out of 5) was the seventh success factor of SISP.
2. (Yang, J., Tanner, K., Kuzic, J., 2011); this study aimed to identify enablers of SISP in an organization; the results showed that one of the enablers was achieving consensus on developing SISP and the enterprise system by active communication with all members of the corporation.
3. (Al-Shalabi, F., Bani-Hamdan, Kh., 2009); This study aimed to identify the impact of the use of information technology on the Organizational Innovation in the Central Electricity Generation Company in Jordan. The study found that 65.9% of respondents agree on their knowledge about communication networks and that their company has big interest in these networks.

Table (4.15): Means and Test values for "Free communication and commitment to change"

	Item	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	IS Planning affects people both within and outside the IS function in The Organization.	8.00	80.00	10.71	0.000*	5
2.	IS planners keep people inside the organization informed of their actions and decisions.	7.69	76.90	6.23	0.000*	6
3.	Top management in the organization works to change the perception that the IS department is an insulated department, far removed from the others.	7.21	72.14	3.79	0.000*	7
4.	Top management encourages free communication inside the organization.	8.41	84.15	12.23	0.000*	2
5.	Top management encourages commitment to change throughout the organization.	8.26	82.62	10.11	0.000*	3
6.	Communication within the organization provides an effective way to identify suitable strategic IT applications.	8.24	82.38	10.04	0.000*	4
7.	IS planners recognize that the success of the IS planning process relies ultimately on its understanding and acceptance by the people inside the organization.	8.45	84.52	13.09	0.000*	1
	All paragraphs of the field	8.04	80.38	14.46	0.000*	

* The mean is significantly different from 6

4.2.8 Success Factors of SISP

Table (4.16) shows that the mean of all paragraphs equals 7.83 (78.29%), Test-value =11.21, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of all paragraphs is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to all paragraphs. Which means that in general, SISP success factors exist in the ICT companies in Gaza Strip but with different levels. For example, the most agreement was for the success factor of "Free communication and commitment to change", while the lowest agreement was for the success factor of "Clear, concise and formal planning procedures".

In general, the agreement level of the SISP success factors by ICT managers (78.29%) is considered high. One reason for this is that; this study was conducted on the general managers and executives and their perspective may affect this result. Another reason, may be the increased realization of the role IT should be in the ICT companies.

The results of this research is partially supported by the following previous studies:

1. (Ang, J., Teo, T., 1997); this study aimed to identify and rank the main success factors of SISP in the Singapore context. Our research agrees with this study as the seven success factors of SISP are supported by this study. But, it is different in the ranking on these success factors. For example: in the study of (Ang, J., Teo, T., 1997), they found that the most important success factor of SISP was the top management support, while in our research, we found that the most agreement was for the free communication and the commitment to changes. The researcher relates this difference to the sample of the study, as the study of (Ang, J., Teo, T., 1997) was based on IT executives, while our research is based on general/executive managers.
2. (Yang, J., Tanner, K., Kuzic, J., 2011); this study aimed to identify enablers of SISP in an organization; the results showed that the most important enabler was the high level of recognition, participation and support of top management and executive committees.
3. (Hovelja, T. et al, 2010); this study aimed to identify the main SISP predictors in the Slovenian enterprises. The results of our research are partially supported by this study as it found that the main success factors are top management commitment and involvement, quality of strategic business planning, the role of IT in strategic business planning, the quality of work of the project teams, the design and implementation of organizational changes, the design and implementation of technical changes, key user involvement, end

user training for IT use, and the control and evaluation of the selection, implementation and use of IT. On the other hand, this study found that the Slovenian enterprises have problematic issues with five success predictors of SISP which are: Alignment of key internal business and IT strategies, Alignment of key external business and IT strategies, Consistency of a priority list of IT projects for the realization of internal business strategies, Consistency of a priority list of IT projects for the realization of business strategies and Adaptation of the organization to fit the acquired IT. One reason for this, may be the lack of teamwork between top and IT managers, which leads to missing the focus on the creation of competitive advantages through the strategic use of IT.

Table (4.16): Means and Test values for all paragraphs of Success Factors of SISP

	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
Top management support	7.98	79.81	8.56	0.000*	2
Clear-cut corporate plan	7.88	78.81	9.74	0.000*	4
Good user-IS relationships	7.61	76.07	7.46	0.000*	6
Qualified personnel	7.66	76.64	9.40	0.000*	5
Anticipating likely changes in IT	7.95	79.47	10.58	0.000*	3
Clear, concise and formal planning procedures	7.56	75.61	6.94	0.000*	7
Free communication and commitment to change	8.04	80.38	14.46	0.000*	1
Success Factors of SISP in general	**7.83**	**78.29**	**11.21**	**0.000***	

*The mean is significantly different from 6

4.3 Discussion of the Level of Strategic Innovation

Table (4.17) shows that the mean of all paragraphs in all dimensions is > 6 (60%), and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of all paragraphs is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to all paragraphs and all dimensions of strategic innovation.

The highest agreement level of paragraphs was for the "Consumer/Customer Insight" which scored 85.8%; this reflects the importance of customers for the companies in the ICT sector as they concentrate on the customers as number one for their success. "Cultural Readiness" comes second in the agreement level with 85.6%, which reflects the realization of the importance of cultural

solutions like the decision making process, functional structures and encouraging innovation mindset.

The lowest agreement level (yet still above the 60% Neutral) was for the "Innovation Goals and Metrics" which scored 75.5%; this reflects the lack of metrics used to measure the innovation. This may be due to the unstructured process and the hard situations in Gaza Strip which prevents companies from expecting and exploring the future. "Managed Innovation Process" comes second in less agreement with a score of 78.7%; with the lowest paragraph of "The organization takes an exploratory approach that focuses internally and externally as well", which means that companies focus internally and have lack of focus for the external environment. Also, the ICT companies should exert more efforts to go beyond traditional planning process. These results in general agree with the following studies:

1. (Wilkin, C., L., Cerpa, N., 2012): The study aimed to investigate the practice and effectiveness of SISP as a function of strategic management in 29 large Australian organizations. The study found that:
    a. The lack of innovative orientation may be attributable to emphasis on the engagement of top management at the expense of the broader organizational community, with outcomes being evaluated in terms of ROI; which agrees with the dimension of "Strategic Alignment".
    b. Equally the lack of an innovative component may in part be linked to a failure to extend the parameters of participation to include people like customers and suppliers; which agrees with the dimension of "Consumer/Customer Insight".
2. (EL-Ghorra, M., 2011); this study found that The Palestinian ministries in the Gaza strip have innovative features and practices that show an overall success in "Directing their staff and business toward innovation", "Developing a creative capabilities", "Building a creative culture", "Managing learning for new ideas", "Organizing for creativity" and "Taking wise decisions". Which means that these ministries enjoy a satisfactory level of innovation.

However the study of (Al-Shalabi, F., Bani-Hamdan, Kh., 2009), which aimed to identify the impact of the use of information technology on the Organizational Innovation in the Central Electricity Generation Company in Jordan, found that 58.2% of respondents don't agree that their company: (Benefits from its previous projects to avoid possible problems, Has big interest in strengthening the relationships between employees, Try again, and doesn't fear from failure, and Encourage innovative people). In my opinion, the reason for this inconsistency with our results may be due to the difference in study population, because our study depends on top management in ICT

firms in Gaza while the study of (Al-Shalabi, F., Bani-Hamdan, Kh., 2009) depends on all employees and managers in the Central Electricity Generation Company in Jordan.

Table (4.17): Means and Test values for "Level of Strategic Innovation"

No.	Paragraph	Mean	Proportional mean (%)	Test value	P-value (Sig.)	Rank
1.	Organization's approach to strategy goes beyond traditional planning methods.	8.02	80.24	8.69	0.000*	2
2.	Organization's approach to new product development goes beyond traditional planning methods.	7.90	79.02	8.05	0.000*	3
3.	The organization takes an exploratory approach that focuses internally and externally as well.	7.60	76.00	5.73	0.000*	4
4.	Organization's approach to strategy challenges the status quo and creatively inspires new thinking.	8.03	80.25	9.24	0.000*	1
Managed Innovation Process		**7.87**	**78.66**	**8.95**	**0.000***	
1.	Organization's Leadership supports (and actively drives) a collaborative culture.	7.93	79.27	7.28	0.000*	2
2.	Top management encourages different departments working cross-functionally to identify and develop innovative solutions.	8.07	80.71	8.74	0.000*	1
Strategic Alignment		**8.00**	**80.00**	**8.41**	**0.000***	
1.	The organization has a systematic process for actively monitoring and exploring emerging trends	7.71	77.14	6.89	0.000*	2
2.	The organization develops alternative scenarios that represent either threats or opportunities.	8.10	80.95	10.57	0.000*	1
Industry Foresight		**7.90**	**79.05**	**9.28**	**0.000***	
1.	The organization directly involves consumers/customers (both existing and potential) as an integral part of the innovation process	8.50	85.00	10.15	0.000*	2
2.	The organization seeks identifying and meeting its consumers/customers (both existing and potential) needs.	8.67	86.67	12.75	0.000*	1
Consumer/Customer Insight		**8.58**	**85.83**	**11.99**	**0.000***	
1.	The organization clearly understands its core competencies.	8.95	89.52	14.65	0.000*	1
2.	The organization has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term technology strategies.	8.36	83.57	9.52	0.000*	3
3.	The organization has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term R&D investments.	8.29	82.86	10.44	0.000*	4
4.	The organization actively explores new ways to extend beyond its existing competencies.	8.43	84.29	11.25	0.000*	2
Core Technologies and Competencies		**8.51**	**85.06**	**12.84**	**0.000***	

1.	The organization demonstrates an innovative mindset.	8.43	84.25	9.59	0.000*	3
2.	The organization demonstrates a bias for collaboration and team work.	8.75	87.50	13.63	0.000*	2
3.	The organization demonstrates an inclusive decision-making style.	8.28	82.75	11.06	0.000*	4
4.	The organization demonstrates a willingness to embrace change, and a penchant for action.	8.78	87.84	16.87	0.000*	1
Cultural Readiness		**8.56**	**85.63**	**14.58**	**0.000***	
1.	The organization has the readiness for developing appropriate operational processes.	8.43	84.25	11.99	0.000*	1
2.	The organization has the readiness for developing appropriate functional structures.	8.28	82.75	9.81	0.000*	2
3.	The organization allocates adequate staffing to high priority innovation initiatives.	7.95	79.49	7.83	0.000*	3
4.	The organization allocates adequate funding to high priority innovation initiatives.	7.40	74.00	4.32	0.000*	4
Process and Structural Readiness		**8.01**	**80.10**	**9.15**	**0.000***	
1.	The organization consistently demonstrates its ability to create measurable business impact	7.92	79.23	8.68	0.000*	1
2.	The organization takes a disciplined approach to the implementation of strategic thinking.	7.90	78.97	7.80	0.000*	2
Disciplined Implementation		**7.91**	**79.10**	**8.47**	**0.000***	
Innovation Goals and Metrics		**7.55**	**75.53**	**5.62**	**0.000***	
1.	The organization takes the time to learn from its previous innovation efforts.	8.16	81.58	8.99	0.000*	2
2.	The organization is committed to deliberately building an innovation-based culture.	8.21	82.05	8.93	0.000*	1
3.	The organization is instituting a set of innovation-focused methodologies.	8.08	80.75	8.51	0.000*	3
Capacity for Sustainable Innovation		**8.15**	**81.46**	**9.70**	**0.000***	
Level of Strategic Innovation in general		**8.17**	**81.71**	**13.41**	**0.000***	

*The mean is significantly different from 6

Level of Strategic Innovation in General:

Table (4.17) shows that the mean of all paragraphs equals 8.17 (81.71%), Test-value =13.41, and P-value=0.000 which is smaller than the level of significance $\alpha = 0.05$. The sign of the test is positive, so the mean of all paragraphs is significantly greater than the hypothesized value 6. We conclude that the respondents agreed to all paragraph. As we mentioned earlier in this research, the level of strategic innovation is measured based on a pre-defined diagnostic test, which was prepared by (Derrick & Soren, 2007), where they have a scoring key for companies to know their level of innovation. Table (4.18) shows this scoring key:

Table (4.18): Scoring Key of the level of strategic innovation

Score	Classification	Description
87.5-100	**Strategic Innovator**	Your organization understands the core elements of strategic innovation and is well positioned to remain a leading innovator. Strategic Innovation is inherent in your culture and you may be feeling confident about your current growth strategies. What to do next? Ensure your organization continues to seek breakthrough opportunities "beyond the leading edge", anticipates consumer/customer needs, cannibalizes its own products and services and drives industry standards. Continue to incorporate your learning and refine your processes for sustainable innovation.
72.5-87	**Inspired Innovator**	Your organization demonstrates some solid innovation practices but there are areas of weakness. Your "opportunity pipeline" may be relatively full, though you may be focusing on incremental innovations. What to do next? Focus on the areas of weakness and begin to define a process for sustainable innovation. Assess the ratio of "big ideas" to "small ideas" to see if you have been looking broadly enough.
60-72	**Aspiring Innovator**	Sparks of innovation exist, though your results may be skewed toward incremental improvements rather than game-changing innovations. Equally, your approach may be ad hoc and unstructured. What to do next? Take a systematic view of the core strategic, consumer/customer focused and organizational factors necessary for Strategic Innovation and seek out "low hanging fruit" opportunities. Take the time to incorporate your learning and start to define a process for sustainable innovation. Assess the ratio of "big ideas" to "small ideas" to see if you have been looking broadly enough.
< 60	**Challenged Innovator**	While you may recognize that innovation is important, your organization's culture, structures and processes do not support Strategic Innovation. Innovation is ad hoc and unstructured and your results may be uninspiring. What to do next? Dedicate resources to a small-scale, focused innovation initiative with measurable deliverables. Take the time to incorporate your learning and start to define a process for sustainable innovation.

Source: (Derrick & Soren, 2007)

So, based on the above scoring key, we can see that the ICT companies have recorded a score of 81.71 which comes in the second category, which is "Inspired Innovator". This means that the ICT companies in Gaza Strip demonstrate some solid innovation practices but there are areas of weakness. ICT Companies should focus on the areas of weakness and begin to define a process for sustainable innovation. For example, the paragraph of "Innovation Goals and Metrics" recorded the minimum value with 75.5; this means that these companies don't demonstrate clear metrics to measure their innovation process, so they need to define goals and metrics for innovation.

4.4 Discussion of Research Hypothesis

4.4.1 Hypothesis 1

There is a statistical relationship at a significant level 0.05 between the requirements of the success of SISP and the level of strategic innovation.

Table (4.19) shows that the correlation coefficient between the requirements of the success of SISP and the level of strategic innovation equals .626 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between the requirements of the success of SISP and the level of strategic innovation. This result is supported by the following studies:

1. (Al-Shalabi, F., Bani-Hamdan, Kh., 2009); This study aimed to identify the impact of the use of information technology on the Organizational Innovation in the Central Electricity Generation Company in Jordan. The study revealed a positive, significant statistical relationship between IT and Organizational Innovation.
2. (Albadri, F., Abdallah, S., 2010); this study aimed to explore SISP approaches in UAE organizations and their potential impacts on IS&T investment. The study found that only 18% of the participant companies deploy formal-effective SISP, and it was clear that these organizations enjoy a much higher rate of IS&T success in terms of suitability and value adding to the business and in terms of users acceptance. The study found that organizations with such profiles are more capable to cope with change and the dynamics associated with the rapidity of technology and are more eligible to achieve their business goals and competitive advantage.
3. (Wilkin, C., L., Cerpa, N., 2012): The study aimed to investigate the practice and effectiveness of SISP as a function of strategic management in 29 large Australian organizations. The study found that SISP would appear to have valued relevance in the organizations.
4. (Basahel, A., Irani, Z., 2009); the study was based on a case study on X Airlines Company. The main result of the case study was the indication of a lack of attention to IS/IT as strategic business units. This created an insufficient process for the IS/IT strategic drivers and techniques to justify supporting the decision-makers.
5. (Hovelja, T. et al, 2010) this study found that the Slovenian enterprises which ranked higher by SISP method and statistically significantly better deploy and use IT, achieve a higher IT capacity utilization rate and realize a higher economic success measured by the created

added value per employee. However, this study found that the success factors of SISP related to achieving competitive advantage are not managed well.

6. (El-Kourd, H., 2007); this study found that the banks IT managers saw IT system as having key operational, strategic, or high potential (future) roles and that the role of IT was more than just as a support mechanism.
7. (Ismael, E., 2011); This study aims to identify the characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle departments of commercial banks operating in the Gaza Strip. The study found that information systems have important role in achieving competitive advantage for banks operating in the Gaza Strip, and also provide valuable knowledge for the banks in improving the quality of service and the development of new services.
8. (EL-Ghorra, M., 2011); this study found that CITs (Communication and Information Technologies) affect the level of innovation.
9. (Abu Karim, A., 2013); this study aimed to explore the relationship between the Management Information Systems (MIS) and the improvement of the management performance in non-governmental organizations (NGOs), in the Gaza Strip. The study found that there is a statistical relationship between the MIS and the improvement of the management performance.

Table (4.19) Correlation coefficient between the requirements of the success of SISP and the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical relationship at a significant level 0.05 between the requirements of the success of SISP and the level of strategic innovation	.626	0.000*

* Correlation is statistically significant at 0.05 level

This hypothesis is divided into the following sub-hypotheses:

4.4.1.1 Sub-Hypothesis 1

There is a statistical significant relationship at level 0.05 between Getting top management support for the planning efforts, and between the level of strategic innovation.

Table (4.20) shows that the correlation coefficient between Getting top management support for the planning efforts, and between the level of strategic innovation equals .553 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between Getting top management support for the planning efforts, and between the level of strategic innovation. This result is supported by the following studies:

1. (Wilkin, C., L., Cerpa, N., 2012): The study aimed to investigate the practice and effectiveness of SISP as a function of strategic management in 29 large Australian organizations. The study found that the lack of innovative orientation may be attributable to emphasis on the engagement of top management.
2. (Al-Hayali, A., Al-Murad, N., 2009); This study aimed to build a theoretical framework for the impact of the Indicators of the success of the management information system and their role in innovation in government and private banks in the city of Mosul, Iraq. The study recommended that top and middle management in banks should be trained on information systems, and they should give more interest to MIS in order to achieve the competitive advantage and innovation.

Table (4.20) Correlation coefficient between Getting top management support for the planning efforts, and between the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical significant relationship at level 0.05 between Getting top management support for the planning efforts, and between the level of strategic innovation	.553	0.000*

* Correlation is statistically significant at 0.05 level

4.4.1.2 Sub-Hypothesis 2

There is a statistical significant relationship at level 0.05 between Having a clear-cut corporate plan to guide IS planning effort and the level of strategic innovation.

Table (4.21) shows that the correlation coefficient between Having a clear-cut corporate plan to guide IS planning effort and the level of strategic innovation equals .515 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between Having a clear-cut corporate plan to guide IS planning effort and the level of strategic innovation. This result is supported by the following previous studies:

1. (Bongani, N., 2013); this study showed that Information Systems planning intensity and degree of integration with business planning had positive effects on business management's commitment to Information Systems as well as on Information Systems contribution to business overall performance.
2. (Basahel, A., Irani, Z., 2009); the study was based on a case study on X Airlines Company. The main result of the case study was the indication of a lack of attention to IS/IT as strategic business units. This created an insufficient process for the IS/IT strategic drivers and techniques to justify supporting the decision-makers.
3. (El-Kourd, H., 2007); this study recommended that if banks want to measure the IT value, then they must begin by aligning the direction of IT strategy and business. This requires that executive management be involved in the process in order to communicate business strategy and intent and participate in the identification of a way in which IT strategy can contribute to the business.
4. (Hovelja, T. et al, 2010); this study stated that Alignment of key internal/external business and IT strategies is related to achieving competitive advantage.

Table (4.21) Correlation coefficient between Having a clear-cut corporate plan to guide IS planning effort and the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical significant relationship at level 0.05 between Having a clear-cut corporate plan to guide IS planning effort and the level of strategic innovation	.515	0.000*

* Correlation is statistically significant at 0.05 level

4.4.1.3 Sub-Hypothesis 3

There is a statistical significant relationship at level 0.05 between Good user-IS relationships, and between the level of strategic innovation.

Table (4.22) shows that the correlation coefficient between Good user-IS relationships, and between the level of strategic innovation equals .379 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between Good user-IS relationships, and between the level of strategic innovation. This result is supported by the following previous studies:

1. (Al-Hayali, A., Al-Murad, N., 2009);This study aimed to build a theoretical framework for the impact of the Indicators of the success of the management information system and their role in innovation in government and private banks in the city of Mosul, Iraq. The study found that there is a statistical relationship between indicators of the success of the MIS (system use and users conviction) and the innovation and excellence.
2. (Ismael, E., 2011); This study aims to identify the characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle departments of commercial banks operating in the Gaza Strip. The study found that Information Systems are affected by the level of involvement of employees in the building and development of these systems, and by the situations and desire of employees. All of this affects the choice of the strategic competence.

Table (4.22) Correlation coefficient between Good user-IS relationships, and between the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical significant relationship at level 0.05 between Good user-IS relationships, and between the level of strategic innovation	.379	0.000*

* Correlation is statistically significant at 0.05 level

4.4.1.4 Sub-Hypothesis 4

There is a statistical significant relationship at level 0.05 between being able to obtain sufficiently qualified personnel to do a proper job and the level of strategic innovation.

Table (4.23) shows that the correlation coefficient between Being able to obtain sufficiently qualified personnel to do a proper job and the level of strategic innovation equals .307 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between Being able to obtain sufficiently qualified personnel to do a proper job and the level of strategic innovation. This result is supported by the following studies:

1. (Al-Shalabi, F., Bani-Hamdan, Kh., 2009); This study aimed to identify the impact of the use of information technology on the Organizational Innovation in the Central Electricity Generation Company in Jordan. The study revealed a significant statistical relationship between IT Human Resources and Organizational Innovation.
2. (Basahel, A., Irani, Z., 2009); the study was based on a case study on X Airlines Company. The study found that X Airlines lacks skills in applying strategic planning techniques for its IS/IT activity. Therefore, X Airlines seeks consultants that have experience in conducting such evaluations. However, X should form a team that understands the drivers of IS/IT strategic planning to deliver the information to the consultancy team and work alongside with it. And this will in turn improve the whole process of strategic analysis, competitiveness and alignment.
3. (Ismael, E., 2011); This study aims to identify the characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle departments of commercial banks operating in the Gaza Strip. The study found that the continuous training of employees and the level of IT education of employees affect the choice of strategic competence.
4. (Abu Karim, A., 2013); this study aimed to explore the relationship between the Management Information Systems (MIS) and the improvement of the management performance in non-governmental organizations (NGOs), in the Gaza Strip. The study found that there is a statistical relationship between the Technical Specialists and the improvement of the management performance.

Table (4.23) Correlation coefficient between Being able to obtain sufficiently qualified personnel to do a proper job and the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical significant relationship at level 0.05 between Being able to obtain sufficiently qualified personnel to do a proper job and the level of strategic innovation	.307	0.000*

* Correlation is statistically significant at 0.05 level

4.4.1.5 Sub-Hypothesis 5

There is a statistical significant relationship at level 0.05 between Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process, and the level of strategic innovation.

Table (4.24) shows that the correlation coefficient between Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process, and the level of strategic innovation equals .666 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process, and the level of strategic innovation. This result is supported by the following studies:

1. (Ismael, E., 2011); This study aims to identify the characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle departments of commercial banks operating in the Gaza Strip. The study found that anticipating likely changes in IT affects the choice of strategic competence.
2. (Abu Karim, A., 2013); this study found that there is a relationship between the software and hardware (in terms of existence of modern ones and alignment with organization needs) and the improvement of the management performance.
3. (Hovelja, T. et al, 2010); this study stated that Adaptation of the organization to fit the acquired IT is related to achieving competitive advantage.

Table (4.24): Correlation coefficient between Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process, and the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical significant relationship at level 0.05 between Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process, and the level of strategic innovation	.666	0.000*

* Correlation is statistically significant at 0.05 level

4.4.1.6 Sub-Hypothesis 6

There is a statistical significant relationship at level 0.05 between Having a clear, concise, formal planning procedure, and the level of strategic innovation.

Table (4.25) shows that the correlation coefficient between Having a clear, concise, formal planning procedure, and the level of strategic innovation equals .607 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between having a clear, concise, formal planning procedure, and the level of strategic innovation. This result is supported by the following studies:

1. (Wilkin, C., L., Cerpa, N., 2012): The study aimed to investigate the practice and effectiveness of SISP as a function of strategic management in 29 large Australian organizations. The study found that the lack of an innovative component may in part be linked to a failure to extend the parameters of participation to include people like customers and suppliers.
2. (Ismael, E., 2011); This study aims to identify the characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle departments of commercial banks operating in the Gaza Strip. The study found that the effectiveness of Information Systems (including the existence of a complete database available, dividing the work in the IS section and existence of description and procedures affecting IS) affects the choice of strategic competence.

Table (4.25) Correlation coefficient between having a clear, concise, formal planning procedure, and the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical significant relationship at level 0.05 between Having a clear, concise, formal planning procedure, and the level of strategic innovation	.607	0.000*

* Correlation is statistically significant at 0.05 level

4.4.1.7 Sub-Hypothesis 7

There is a statistical significant relationship at level 0.05 between Having free communication and commitment to change throughout the organization and the level of strategic innovation.

Table (4.26) shows that the correlation coefficient between Having free communication and commitment to change throughout the organization and the level of strategic innovation equals .618 and the p-value (Sig.) equals 0.000. The p-value (Sig.) is less than 0.05, so the correlation coefficient is statistically significant at $\alpha = 0.05$. We conclude there exists a significant relationship between Having free communication and commitment to change throughout the organization and the level of strategic innovation. This result is supported by the following studies:

1. (Al-Shalabi, F., Bani-Hamdan, Kh., 2009); This study aimed to identify the impact of the use of information technology on the Organizational Innovation in the Central Electricity Generation Company in Jordan. The study revealed a significant statistical relationship between having Communication Networks and Organizational Innovation.
2. (Ismael, E., 2011); This study aims to identify the characteristics of information systems and their impact in determining the choice of strategic competition in the upper and middle departments of commercial banks operating in the Gaza Strip. The study found that the effectiveness of Information Systems (including the existence of modern communication network) affects the choice of strategic competence.

Table (4.26) Correlation coefficient between Having free communication and commitment to change throughout the organization and the level of strategic innovation

	Pearson Correlation Coefficient	**P-Value (Sig.)**
There is a statistical significant relationship at level 0.05 between Having a clear, concise, formal planning procedure, and the level of strategic innovation	.618	0.000*

* Correlation is statistically significant at 0.05 level

4.4.2 Hypothesis 2

There is a statistical significant difference among the respondents toward the Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation due to:

a) Company Information (Company Age, Number of Employees)

Table (4.27) shows that the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$, then there is insignificant difference in respondents' answers toward the Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation. We conclude that the Company Information have no effect on the Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation. This can be justified, because the most companies are still in the same range of age (less than 15 years) and they are classified as Small and Medium Enterprises (SME's) which means that they share common characteristics.

This result is supported by the study of (Spremic,M., Strugar, I., 2002); as this study aimed to identify the SISP practices in Croatia. The study found that from a Croatian business perspective, SISP does not depend on company size and number of employees, neither is it influenced by economic activity.

Table (4.27): Analysis of Variance and Independent Samples T-test for Company Information

No	Company Information	Test Name	Test Value	P-value(Sig.)
1.	Company Age	Analysis of Variance	2.454	0.078
2.	Number of Employees	Independent Samples T-test	0.848	0.404

b) Personal Traits (Age, Gender, Educational Attainment, Field of Specialization Total years of Experience and Years of Experience in current position)

Table (4.28) shows that the p-value (Sig.) is greater than the level of significance $\alpha = 0.05$ for each Personal Traits, then there is insignificant difference in respondents' answers toward Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation. We conclude that the Personal Traits have no effect on Implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation. This can be justified, due to the similarity in life conditions where all ICT managers live in the same Palestinian general economic situations.

This result is supported by the study of (Ismael, E., 2011) which found that Age, Gender, Educational Attainment and Field of Specialization don't affect achieving the competitive advantage in the banks operating in Gaza Strip. Also it's supported by the study of (EL-Ghorra, M., 2011) which found that there is no significant statistical difference among respondents answers regarding the influence of knowledge sharing on the level of innovation attributed to personal variables (gender, experience and Qualification). But, he found that there is a significant difference among respondents' answers regarding the influence of knowledge sharing on the level of innovation toward Knowledge Accessibility and Knowledge Applicability due to age, where managers in fifties scored more than other age groups. This is inconsistent with our results, because our sample doesn't contain managers in the age of fifties except 2, which is a very small number to take a judge and affect the results.

Table (4.28): Analysis of Variance and Independent Samples T-test for Personal Traits

No	Personal Traits	Test Name	Test Value	P-value(Sig.)
1.	**Age**	Analysis of Variance	1.242	0.300
2.	**Gender**	Independent Samples T-test	0.788	0.435
3.	**Educational Attainment**	Independent Samples T-test	-0.541	0.591
4.	**Field of Specialization**	Analysis of Variance	0.016	0.997
5.	**Total years of Experience**	Independent Samples T-test	-0.932	0.357
6.	**Years of Experience in current position**	Analysis of Variance	1.343	0.275

CHAPTER FIVE

CONCLUSIONS & RECOMMENDATIONS

This chapter consists of the following sections:

5.1 Introduction

5.2 Conclusions

5.3 Recommendations

5.4 Suggestions for Future Research

5.1 Introduction

The aim of this study was to investigate the implications of Strategic Information Systems Planning (SISP) on the level of Strategic Innovation in ICT firms in Gaza Strip. In this chapter, the conclusions and the recommendations of the study will be discussed.

5.2 Conclusions

In light of the findings that were presented in chapter four, the following conclusions can be drawn:

Success Factors of SISP

- In general, the success factors of SISP (Top management support, Clear-cut corporate plan, Good user-IS relationships, Qualified personnel, Anticipating likely changes in IT, Clear, concise and formal planning procedures and Free communication and commitment to change) are agreed by 78.29% of the respondents, which means that ICT companies are ready to apply SISP successfully.
- There is a strong positive relationship (0.626) between the requirements of the success of SISP and the level of strategic innovation.

Top Management Support

- 79.81% of respondents agree that top management in ICT firms supports Information Systems Planning efforts by setting the overall direction of IS Planning, participating actively in SISP, resolving problems encountered by the steering committee of SISP, providing the necessary resources (manpower & budget) for SISP process and educating employees about the importance of SISP.
- There is a strong positive relationship (0.553) between getting top management support for the IS planning efforts, and the level of strategic innovation.

Clear-cut Corporate Plan

- 78.8% of respondents agree that ICT Companies have a clear-cut corporate plan to guide Information Systems Planning efforts depending on the following results: The strategic plans of the ICT companies define the role IT should play and The ICT companies have a defined scope of the IS planning process. Moreover, the scope of SISP is limited to real business needs and there is a strong linkage between Organization's corporate objectives and its IS objectives. There is a good fit between corporate strategic plan and

the IS plan. Also, IS planners deconstruct a business enterprise into processes and determine if they are adequately supported by the existing systems and they understand the organization's culture and goals. IS systems which don't align with business needs are upgraded or replaced.

- There is a strong positive relationship (0.515) between having a clear-cut corporate plan to guide IS planning effort, and the level of strategic innovation.

Good User-IS Relationships

- 76.07% of respondents agree that there is a good user-IS relationships in ICT companies, depending on the following results: There is a good communication between IS staff and employees (users). And the framework for the effective user-IS relationships starts with top management. In addition, there is a formally appointed liaison officer whose task is to link the IS department with other departments. Top management takes the lead in bridging the gap between business and IS staff. Moreover, users in organization are educated about the role and potential of IT. There is a good partnership between business and IT staff. And users are made to feel part of the change brought about by IS planning.
- There is a strong positive relationship (0.379) between good User-IS relationships, and the level of strategic innovation.

Sufficiently Qualified Personnel

- 76.64% of respondents agree that ICT companies are being able to obtain sufficiently qualified personnel to do a proper job, depending on the following results: ICT companies rely on a pool of sufficiently qualified IS personnel. Also, they use inside experts to prepare IS plans because they are familiar with company culture and objectives. In addition, Software/hardware vendors are important elements in IS planning. The ICT companies provide training for employees in order to improve their capabilities in IT.
- There is a strong positive relationship (0.307) between being able to obtain sufficiently qualified personnel to do a proper job, and the level of strategic innovation.

Anticipate likely changes in IT

- 79.47% of respondents agree that ICT companies anticipate likely changes in IT (and environmental changes) which might affect the Strategic IS Planning process, depending on the following results: The company identifies new technologies in the field of

Information Systems and be proactive to it. The infrastructure and IS environment in the company are flexible so that they can support any IT developments. In addition, IS planners depend on vendors to keep them informed of new advances in IT. New innovative products by other vendors of the Organization are taken in consideration. Moreover, IS planners identify new technologies and assimilate it into the company. The company encourages employees to keep up with what's new in IS. The company provides sufficient budget for research and development in the field of information technology.

- There is a strong positive relationship (0.666) between Anticipating likely changes in IT (and environmental changes) which might affect the strategic IS planning process, and the level of strategic innovation.

Clear, Concise, and Formal IS Planning Procedure

- 75.61% of respondents agree that ICT companies have a clear, concise, and formal IS planning procedure, depending on the following results: There are formal IS planning procedures for the process of IS planning. The company has a clear and concise IS planning procedure that divides the IS Planning process into distinct stages. In addition, IS planning is carried out systematically involving all major stakeholders. The company prioritizes IS projects in terms of their strategic value. Moreover, the procedure or Methodology used in IS planning in The Organization depends on the need of the organization.
- There is a strong positive relationship (0.607) between having a clear, concise, formal planning procedure, and the level of strategic innovation.

Free Communications and Commitment to Change

- 80.34% of respondents agree that a free communications and commitment to change throughout the ICT companies exist, depending on the following results: IS Planning affects people both within and outside the IS function in the Company. IS planners keep people inside the company informed of their actions and decisions. In addition, the top management in the company works to change the perception that the IS department is an insulated department, far removed from the others. Top management encourages free communication inside the company. Top management encourages commitment to change throughout the company. Moreover, Communication within the company provides an effective way to identify suitable strategic IT applications. IS planners

recognize that the success of the IS planning process relies ultimately on its understanding and acceptance by the people inside the company.

- There is a strong positive relationship (0.618) between Having free communication and commitment to change throughout the organization, and the level of strategic innovation.

Strategic Innovation

- In general, the level of ICT companies innovation is 81.71% (according to our model), which means the ICT companies in Gaza Strip demonstrate some solid innovation practices but there are areas of weakness.

Managed Innovation Process

- 78.66% of respondents agree that ICT companies have a managed Innovation process, depending on the following results: Organization's approach to strategy goes beyond traditional planning methods, Organization's approach to new product development goes beyond traditional planning methods, the organization takes an exploratory approach that focuses internally and externally as well, and Organization's approach to strategy challenges the status quo and creatively inspires new thinking.

Strategic Alignment

- 80% of respondents agree that ICT companies have a good strategic alignment between departments, depending on the following results: Organization's Leadership supports (and actively drives) a collaborative culture, and Top management encourages different departments working cross-functionally to identify and develop innovative solutions.

Industry Foresight

- 79.05% of respondents agree that ICT companies have a good industry foresight (emerging trends, threats and opportunities), depending on the following results: The organization has a systematic process for actively monitoring and exploring emerging trends, and the organization develops alternative scenarios that represent either threats or opportunities.

Consumer/Customer Insight

- 85.83% of respondents agree that ICT companies have a good insight about their customers/ consumers, depending on the following results: The organization directly

involves consumers/customers (both existing and potential) as an integral part of the innovation process, and the organization seeks identifying and meeting its consumers/customers (both existing and potential) needs.

Core Technologies and Competencies

- 85.06% of respondents agree that ICT companies understand their core technologies and competencies, depending on the following results: The organization clearly understands its core competencies, The organization has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term R&D investments, and the organization actively explores new ways to extend beyond its existing competencies.

Cultural Readiness

- 85.63% of respondents agree that ICT companies have cultural readiness for innovation, depending on the following results: The organization demonstrates an innovative mindset, The organization demonstrates a bias for collaboration and team work, The organization demonstrates an inclusive decision-making style, and the organization demonstrates a willingness to embrace change, and a penchant for action.

Process and Structural Readiness

- 80.10% of respondents agree that ICT companies have process and structural readiness for innovation, depending on the following results: The organization has the readiness for developing appropriate operational processes, The organization has the readiness for developing appropriate functional structures, The organization allocates adequate staffing to high priority innovation initiatives, and the organization allocates adequate funding to high priority innovation initiatives.

Disciplined Implementation

- 79.1% of respondents agree that ICT companies have a disciplined implementation in its business strategies, depending on the following results: The organization consistently demonstrates its ability to create measurable business impact, and the organization takes a disciplined approach to the implementation of strategic thinking.

Innovation Goals and Metrics

- 75.53% of respondents agree that ICT companies established innovation-related goals and measures.

Capacity for Sustainable Innovation

- 81.46% of respondents agree that ICT companies have the capacity for a Sustainable Innovation, depending on the following results: The organization takes the time to learn from its previous innovation efforts, The organization is committed to deliberately building an innovation-based culture, and the organization is instituting a set of innovation-focused methodologies.

5.3 Recommendations

The ICT companies should start a comprehensive SISP process which can help these companies to be strategically innovative. The researcher has pointed a number of recommendations for a successful SISP process and for increasing the level of strategic innovation.

Recommendations for a successful SISP process

1. Top management in ICT companies should give extra support and follow up for the Information Systems Planning Process; by participating actively in the planning of IS, resolving problems encountered by IS planners and educating employees about the importance of SISP.
2. ICT Companies should prepare a clear-cut corporate plan to guide Information Systems Planning efforts; by defining the role IT should play and the scope of the IS planning process, linking the SISP scope & objectives with real business needs, and providing a good fit between corporate strategic plan and the IS plan.
3. ICT companies should ensure a good user-IS relationships; by providing a good communication between IS staff and employees (users), starting with top management in a framework for the effective user-IS relationships, appointing a liaison officer whose task is to link the IS department with other departments, bridging the gap between business and IS staff and making users to feel part of the change brought about by IS planning process.
4. ICT companies need to obtain sufficiently qualified personnel to do a proper job for IS planning; by using inside and outside experts to prepare IS plans, taking in consideration all

software/hardware vendors, and providing sufficient training for employees in order to improve their capabilities in IT.

5. ICT companies should anticipate likely changes in IT (and environmental changes) which might affect the Strategic IS Planning process; by identifying new technologies in the field of Information Systems and being proactive to it, providing a flexible infrastructure and IS environment so that they can support any IT developments, taking in consideration the new innovative products by current and other vendors of the Organization, encouraging employees to keep up with what's new in IS, and providing sufficient budget for research and development in the field of information technology.
6. ICT companies should have a clear, concise, and formal IS planning procedure; by having a clear and concise IS planning procedure that divides the IS Planning process into distinct stages, carrying out the IS planning systematically involving all major stakeholders, prioritizing IS projects in terms of their strategic value and making the procedure or Methodology used in IS planning to be dependent on the need of the organization.
7. A free communications and commitment to change throughout the ICT companies should be available; by keeping people inside the company informed of the actions and decisions of IS planners, changing the perception that the IS department is an insulated department and far removed from the others, providing a good communication within the company which provides an effective way to identify suitable strategic IT applications, and recognizing that the success of the IS planning process relies ultimately on its understanding and acceptance by the people inside the company.

Recommendations for increasing the level of strategic innovation

1. ICT companies should have a managed innovation process; by making organization's approaches to strategy and product development to go beyond traditional planning methods and to challenge the status quo and creatively inspires new thinking, and by taking an exploratory approach that focuses internally and externally as well.
2. ICT companies need to have a good strategic alignment between departments; so organization's Leadership should support (and actively drive) a collaborative culture, and top management should encourage different departments working cross-functionally to identify and develop innovative solutions.
3. ICT companies should have a good industry foresight; by having a systematic process for actively monitoring and exploring emerging trends, and developing alternative scenarios that represent either threats or opportunities.

4. ICT companies need to have a good insight about their customers/ consumers; by directly involving consumers/customers (both existing and potential) as an integral part of the innovation process, and by identifying and meeting the consumers/customers' needs.
5. ICT companies should understand their core technologies and competencies; by explicitly outlining the linkage between long-term strategic goals and short- and medium-term R&D investments, and by exploring new ways to extend beyond its existing competencies.
6. ICT companies should have cultural readiness for innovation; by demonstrating an innovative mindset, demonstrating a bias for collaboration and team work, and demonstrating an inclusive decision-making style and a willingness to embrace change, and a tendency for action.
7. ICT companies should have process and structural readiness for innovation. So, they should have the readiness for developing appropriate operational processes and functional structures, and they should allocate adequate staffing and budget to high priority innovation initiatives.
8. ICT companies should have a disciplined implementation in its business strategies. So, they should consistently demonstrate their ability to create measurable business impact, and they should take a disciplined approach to the implementation of strategic thinking.
9. ICT companies need to determine specific goals and metrics for the Innovation. For example: X% of revenues must come from products/services introduced over the past Y years.
10. ICT companies should have the capacity for a Sustainable Innovation; by taking the time to learn from their previous innovation efforts, being committed to deliberately building an innovation-based culture, and by instituting a set of innovation-focused methodologies.

5.4 Suggestions for Future Research

Due to the importance of SISP, further research can be carried on:

1. Creating a model for an SISP approach in ICT companies in Palestine.
2. Conducting the same study on large corporations or different private sectors.
3. The effect of SISP on decision making process in ICT companies in Palestine.
4. The effect of SISP on product and service development in ICT companies in Palestine.
5. The impact of SISP on the performance of the employees in ICT companies in Palestine.
6. The effect of SISP on the firm's market share in ICT companies in Palestine

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APPENDICES

Appendix A: Concerns or unsuccessful features of SISP

(Galliers & Leidner, 2003)

Method concerns

1 It did not lead to management identifying applications supportable at a Cost
2 No regeneration or review
3 Failed to discover our competitors' moves or understand their improvements
4 Not enough planning; too much emphasis on development and projects
5 It was not connected to business planning
6 It was too internally focused
7 Sensibly allocating resources to needs was a problem
8 Business needs were ignored or not identified
9 Not flexible or reactive enough
10 Not coordinated
11 Not enough consideration of architecture
12 Priority-setting and resource allocation were questionable
13 The plans were soon out of date
14 Business direction and plans were inadequate
15 Not enough strategic thinking
16 The thinking was too functional and applications-oriented and not process-based
17 It was too technical and not business-based
18 It was over theoretical and too complicated
19 It could have been done quicker; it took too long
20 It developed a bureaucracy of its own
21 We have not solved identification of corporate-wide needs
22 The architecture was questionable; people were not convinced by it
23 We still don't know how to incorporate and meet short-term needs
24 We did not complete the company-entity model
25 We found it difficult justifying the benefits
26 It was too much about automating today's operations
27 It was too ad hoc; insufficient method
28 Many of the recommendations did not meet user aspirations

Process concerns

1 Some businesses were less good at, and less committed to, planning than others
2 The exercise was abrogated to the IS department
3 Inadequate understanding across all management

4 Line management involvement was unsatisfactory

5 Lack of senior management involvement

6 No top management buy-in

7 The strategy was not sold or communicated enough

8 We still have poor user-IS relationships

9 Too many IS people have not worked outside of IS

10 Poor IT understanding of customer and business needs

11 Line management buy-in was low

12 Little cross-divisional learning

13 IS management quality was below par

14 Senior executives were not made aware of the scale of change required

15 Users lacked understanding of IT and its methods

16 It was too user-driven in one period

17 We are still learning how to do planning studies

18 Planning almost never works; there are too many 'dramas'

19 The culture has not changed enough

20 We oversold the plan

21 Too much conflict between organizational units

Implementation concerns

1 We have not broken the resource constraints

2 We have not implemented as much as we should

3 It was not carried through into resource planning

4 The necessary technology planning was not done

5 We have not achieved the system benefits

6 We made technical mistakes

7 Some of the needs are still unsatisfied

8 Appropriate hardware or software was not available

9 Cost and time budget returns

10 We were not good at specifying the detailed requirements

11 Defining staffing needs was a problem

12 We have not gotten anything off the ground yet

13 We had insufficient skilled development resources

14 Regulatory impediments

15 We were overambitious and tried to change too much

16 We still have to catch up technically.

Appendix B: PITA members in Gaza Strip

#	Company Name	Category	Mail
1	AL-Qudwa Company	HW	info@alqudwa.ps ; fathialqudwa@gmail.com
2	Al-Salam Group	SW	shoukri.karraz@qudsbank.ps
3	Al-Saqqa for Electonic Equipment	HW	Tareq@alsaqqa.ps
4	ALTARIQ Systems & Projects	SW	tarek@altariq.ps, tarek@p-i-s.com
5	Bassel Joudah (BEST)	SW	Bassel@beststs.net
6	Bisan Tech for systems & communications Ltd	HW	Haitham@BisanTech.ps
7	Career Development & Business Excellence	TRAINING	wajdi@career-me.com
8	Castle Establishment Company	SW	castle@castlesoft.net
9	CityNet	ISP	info@citynet.ps ; f.qarmout@citynet.ps
10	computer connect	HW	m.ali@connect.ps
11	Computer Land Center	TRAINING	info@computerland.ps ; engsaeb@gmail.com
12	Development Pioneers Company for Consultations	CONSULTANCY	info@pioneer.ps ,wessam@pioneer.ps
13	Digital Zone SmartNet Co. Ltd.	HW	ismail@smartnet.ps ; thaer.a@smartnet.ps
14	Effects For Consultation & Development	CONSULTANCY	info@effects.ps
15	El-Helou Commercial Establishment Ltd.	HW	nasser@elhelo.com
16	Fusion internet & communications system	ISP	info@fusion.ps
17	Future Information Systems	SW	jihad@fis.ps ; sharif@fis.ps ; info@fis.ps
18	Future Tech	HW	alamim@future.ps
19	ICT-Warehouse for Information & Communication technology	SW	info@ictwarehouse.pro
20	IT PARTNERS	SW	hadi@itp.ps ; omar@itp.ps
21	Jamal Sons Telecom Computers Systems Ltd.	TELECOM	mod55@palnet.com
22	Jerusalem information technology	HW	aymanbak@hotmail.com
23	johatoon for cartoon company	SW	info@johatoon.ps
24	Mashareq	SW	info@mashareq.ps
25	ModernTech Corporation Ltd(MTC)	SW	mtcg@mtc.ps
26	Nepras	SW	fady.issawi@nepras.com
27	netstream	ISP	motasem@netstream.ps
28	Orange Palestine for Investment Technology	ISP	osama@orange.ps
29	Palinvest- Development and Business Services	SW	aelfarra@palinvest.ps
30	Palestine For Communication & IT	SW	msabra@pcit.ps ; info@pcit.ps

31	PC - Home	HW	marwan_sada@hotmail.com
32	PC WORLD COMPANY LTD	HW	rami@pcworld-co.com
33	SADAF Technology Development	SW	info@sadaf.ps
34	Salsabeel for Computers	HW	nabiel_ayesh@hotmail.com
35	Sidata Information and Communication Systems Ltd.	SW	falami@sidata.ps
36	Smart For Information Technology Co. Ltd	SW	amjad@asfour.ps
37	Speed Click for IT & Tele Communications Ltd.	ISP	wael@speedclick.ps ; sales@speedclick.ps
38	STEP for Technology & Development	SW	info@step.ps
39	TATWEER Business Services	SW	haitham.abushaaban@tatweer.ps
40	Technical Services Center	SW	tscgaza@hotmail.com
41	Teletalk Telecom & IT Co.Ltd	TELECOM	Info@tele-talk.net, talal@tele-talk.net
42	UltraNet for Communication & Information Technology	SW	Support@ultrnet.ps ; info@ultranet.ps
43	Unit One ICT Co.	SW	info@unitone.ps
44	Utopia for Training&IT Solution	TRAINING	info@utopia.ps
45	VISION PLUS	TRAINING	info@visionplus.ps
46	Ziyad Mourtaga & Bros. Co.	HW	info@z-mourtaga.ps

Appendix C: QUESTIONNAIRE REFEREES

Prof. Majed El Farra	Islamic University - Gaza
Dr. Sami Abo Ross	Islamic University - Gaza
Dr. Sameer Safi	Islamic University - Gaza
Dr. Rushdi Wadi	Islamic University - Gaza
Dr. Waseem Al Habeel	Islamic University - Gaza
Dr. Yousef Bahar	Islamic University - Gaza
Dr. Akram Sammor	Islamic University - Gaza
Eng. Tarek Eslim	PITA Member & Al Tareq Systems Company General Manager
Mr. Yousef Shaath	PITA Gaza Regional Manager
Eng. Bassam Al Adini	Jawwal Technical Manager- Gaza
Eng. Mustafa Ali	Jawwal D&M Manager- Gaza

Appendix D: Final Questionnaire in Arabic

بسم الله الرحمن الرحيم

الجامعة الإسلامية – غزة		**رقم الاستبانة :**
الدراسات العليا- ماجستير إدارة الأعمال		**تاريخ تعبئة الاستبانة:**

أخي الكريم / أختي الكريمة،،،

السلام عليكم ورحمة الله وبركاته ...

يقوم الباحث محمود إبراهيم سلمان بعمل دراسة بعنوان **" أثر التخطيط الاستراتيجي لأنظمة المعلومات (Strategic Information Systems Planning (SISP)) على مستوى الإبداع الاستراتيجي، دراسة تطبيقية على شركات الاتصالات وتكنولوجيا المعلومات في قطاع غزة"** وذلك لاستكمال متطلبات الحصول على درجة الماجستير في إدارة الأعمال من الجامعة الإسلامية - بغزة.

كلنا أمل أن تكونوا خير معين لهذه الدراسة، وذلك من خلال الإجابة على الاستبيان المرفق مع هذا الطلب، مع العلم أن مساهمتكم في تعبئة الاستبانة سيكون لها أكبر الأثر في الحصول على النتائج المرجوة. و سيتم التعامل مع البيانات بسرية تامة، وستستخدم فقط في أغراض البحث العلمي .

وتقبلوا فائق الاحترام والتقدير،

الباحث

م. محمود إبراهيم سلمان

ديسمبر، 2013

الجزء الأول : معلومات عامة:

الرجاء التكرم بوضع إشارة (√) أمام الإجابة الصحيحة:

أولا: المعلومات الشخصية:

1. الفئة العمرية

□ أقل من 25 سنة □ 25- أقل من 30 سنة □ 30- أقل من 40 سنة □ 40- أقل من 50 سنة □ 50 سنة فما فوق.

2. الجنس

□ ذكر □ أنثى

3. المؤهل العلمي

□ ثانوية عامة فما دون □ دبلوم متوسط □ بكالوريوس □ ماجستير □ دكتوراة

4. التخصص العلمي

□ هندسة كمبيوتر، اتصالات □ نظم معلومات □ تجارة/ إدارة أعمال □ تخصص آخر، حدد_____

5. عدد سنوات الخبرة الكلية

□ أقل من 3 سنوات □ 3- أقل من 6 سنوات □ 6- أقل من 10 سنوات □ 10 سنوات فأكثر

6. عدد سنوات الخبرة في الوظيفة الحالية

□ أقل من 3 سنوات □ 3- أقل من 6 سنوات □ 6- أقل من 10 سنوات □ 10 سنوات فأكثر

ثانيا: معلومات عن الشركة:

1. عمر الشركة

□ أقل من 5 سنوات □ 5-أقل من 10 سنوات □ 10-أقل من 15 سنة □ 15 سنة فأكثر

2. عدد موظفي الشركة

□ أقل من 10 □ 10- أقل من 20 □ 20- أقل من 40 □ 40- أقل من 60 □ 60- أقل من 80 □ 80- أقل من 100 □ 100 فأكثر.

الجزء الثاني : عوامل نجاح التخطيط الاستراتيجي لأنظمة المعلومات:

أرجو الإجابة على البنود التالية بوضع الدرجة المناسبة، بحيث تتدرج الإجابات من 10 كأعلى الاستجابات إلى 1 كأدنى الاستجابات. وإذا كنت غير متأكد من الإجابة (محايد) فإن ذلك يعني 5 أو 6.

التخطيط الاستراتيجي لأنظمة المعلومات:
عملية التخطيط التي تحدد مجموعة من التطبيقات والحلول والاجراءات الحاسوبية والتكنولوجية ، والتي تهدف إلى مواءمة نظم المعلومات في الشركة مع استراتيجيتها من أجل خلق ميزة تنافسية وتحقيق أهداف العمل.

البند	الدرجة 10-1
أولا: دعم الادارة العليا	
1. تحدد الادارة العليا الاتجاه العام لتخطيط انظمة المعلومات في الشركة.	
2. تشارك الإدارة العليا بفاعلية في عملية التخطيط الاستراتيجي لانظمة المعلومات.	
3. تشكل الإدارة العليا لجنة لتخطيط انظمة المعلومات في الشركة.	
4. تساعد الإدارة العليا في حل المشاكل التي قد تواجه اللجنة المسئولة عن التخطيط الاستراتيجي لانظمة المعلومات.	
5. توفر الإدارة العليا في الشركة الموارد اللازمة (الموارد البشرية والميزانية) لعملية التخطيط الاستراتيجي لانظمة المعلومات	
6. تتابع الإدارة العليا اعداد وتنفيذ التخطيط لانظمة المعلومات في الشركة.	
7. تقوم الإدارة العليا بتوعية العاملين بأهمية تخطيط انظمة المعلومات.	
ثانيا: خطة استراتيجية واضحة	
1. تُعرِّف الخطة الاستراتيجية للشركة دور تكنولوجيا المعلومات بوضوح.	
2. تحدد الشركة الهدف من عملية تخطيط انظمة المعلومات.	
3. يتلاءم الهدف من عملية التخطيط الاستراتيجي لانظمة المعلومات مع احتياجات العمل الحقيقية.	
4. توجد صلة قوية بين الأهداف الاستراتيجية للشركة وبين اهداف عملية تخطيط انظمة المعلومات.	
5. توجد مواءمة بين خطة الشركة الاستراتيجية وبين خطة أنظمة المعلومات.	
6. يقوم مخططو انظمة المعلومات بتقسيم المهام الرئيسية في الشركة الى عمليات صغيرة، لتحديد ما اذا كانت انظمة المعلومات الحالية تدعم هذه العمليات.	
7. يدرك مخططو انظمة المعلومات الاستراتيجية ثقافة الشركة وأهدافها.	
8. تُطوِّر الشركة أنظمة المعلومات التي لا تتلاءم مع حاجة العمل أو تقوم باستبدالها.	
ثالثا: علاقة جيدة بين المستخدم وبين انظمة المعلومات	
1. يتواصل موظفو انظمة المعلومات مع بقية الموظفين (كمستخدمين) بشكل فعال.	
2. تضع الادارة العليا الاطار العام لعلاقة وطيدة بين المستخدمين و بين انظمة المعلومات.	
3. تعيِّن الشركة موظفا مسئولا عن الارتباط والتواصل بين قسم انظمة المعلومات وبين بقية اقسام الشركة.	
4. تبادرالإدارة العليا في الشركة بسدّ الفجوة بين موظفي قسم انظمة المعلومات وبين بقية الاقسام.	
5. تقوم الشركة بتثقيف المستخدمين فيها حول دور وإمكانات تكنولوجيا المعلومات.	
6. يتعاون موظفو تكنولوجيا المعلومات مع بقية الموظفين في الشركة.	
7. يشارك الموظفون (كمستخدمين) في عملية تخطيط أنظمة المعلومات في الشركة.	
رابعا: كوادر مؤهلة	
1. تعتمد الشركة على مجموعة من الموظفين المؤهلين في مجال تكنولوجيا المعلومات.	
2. تستعين الشركة بخبراء من خارجها من اجل اعداد خططها لانظمة المعلومات.	
3. تستخدم الشركة خبراء من داخلها لاعداد خطة انظمة المعلومات لأنهم على دراية بثقافة الشركة وأهدافها.	
4. تعتبر الشركة المصنعين والمزودين للبرمجيات والمعدات التكنولوجية عناصر مهمة في عملية تخطيط انظمة المعلومات	
5. تقوم الشركة بتدريب الموظفين وتطوير قدراتهم في مجال تكنولوجيا المعلومات.	
خامسا: توقع التغيرات المحتملة في تكنولوجيا المعلومات	
1. تحدد الشركة التكنولوجيات الجديدة في مجال انظمة المعلومات وتكون سباقة اليها.	
2. تدعم البنية التحتية وبيئة أنظمة المعلومات المرنة في الشركة أي تطورات في تكنولوجيا المعلومات.	

3.	يعتمد مخططو انظمة المعلومات في الشركة على المصنعين والمزودين ليكونوا على اطلاع بالتطورات الجديدة في مجال تكنولوجيا المعلومات.	
4.	يأخذ مخططو انظمة المعلومات بالاعتبار المنتجات المبتكرة من قبل مزودين اخرين غير المزودين الحاليين للشركة.	
5.	يحاول مخططو انظمة المعلومات البحث والتعرف على التكنولوجيات الجديدة واستيعابها داخل الشركة.	
6.	تشجع الشركة على مواكبة كل ما هو جديد في تكنولوجيا المعلومات.	
7.	توفر الشركة الميزانية الكافية للبحث والتطوير في مجال تكنولوجيا المعلومات.	
سادسا: اجراءات تخطيط واضحة		
1.	توجد اجراءات رسمية في الشركة لعملية تخطيط انظمة المعلومات.	
2.	تنقسم عملية تخطيط انظمة المعلومات إلى مراحل محددة وواضحة المعالم.	
3.	يُنفذ التخطيط الاستراتيجي لأنظمة المعلومات بشكل منهجي بحيث تشمل كل المعنيين واصحاب المصالح.	
4.	تُرتَّب الشركة الاولويات في مشاريع انظمة المعلومات من حيث قيمتها الاستراتيجية.	
5.	تعتمد الإجراءات و المنهجية المستخدمة في عملية تخطيط انظمة المعلومات في الشركة على حاجتها.	
سابعا: حرية التواصل وثقافة التغيير		
1.	تؤثر عملية تخطيط أنظمة المعلومات على الاشخاص داخل وخارج حدود وظائف أنظمة المعلومات في الشركة.	
2.	يعمل مخططو انظمة المعلومات على ابقاء الاشخاص داخل الشركة على علم بأفعالهم وقراراتهم.	
3.	تعمل الإدارة العليا في الشركة على تغيير التصور الموجود بأن قسم تكنولوجيا المعلومات هو قسم معزول، وبعيد عن الاخرين.	
4.	تشجع الإدارة العليا التواصل بحرية وفاعلية داخل الشركة.	
5.	تشجع الإدارة العليا وتلتزم بثقافة التغيير داخل الشركة.	
6.	تمثل الاتصالات داخل الشركة وسيلة فعالة لتحديد تطبيقات استراتيجية تكنولوجية مناسبة.	
7.	يدرك مخططو أنظمة المعلومات أن نجاح عملية التخطيط يعتمد على فهمها وقبولها من قبل الأشخاص داخل الشركة.	

الجزء الثالث : مستوى الإبداع الاستراتيجي:

الابداع الاستراتيجي: ابتكار استراتيجيات للنمو، وفئات جديدة من المنتجات أو الخدمات أو نماذج الأعمال التي تغير قواعد اللعبة وتضيف قيمة جديدة للمستهلكين والعملاء والشركة. وهو تحدي للشركة للتطلع الى ما هو أبعد من حدود أعمالها الحالية وللمشاركة بعقلية منفتحة في استكشاف جميع الاحتمالات الممكنة.

	البند	**الدرجة 10-1**
1. عملية ابداع منظمة		
1.	يتجاوز النهج الاستراتيجي للشركة أساليب التخطيط التقليدية.	
2.	يتجاوز تطوير المنتجات الجديدة في الشركة أساليب التخطيط التقليدية.	
3.	تتخذ الشركة نهجا استراتيجيا استكشافيا يركز على الداخل والخارج.	
4.	يتحدى النهج الاستراتيجي للشركة الوضع الراهن بتوفير الالهام لافكار جديدة.	
2. التوافق الاستراتيجي		
1.	تدعم ادارة الشركة تكوين ثقافة تعاونية بين الادارات المختلفة.	
2.	تدعم الادارة العليا في الشركة الادارات التي تتقاطع وظيفيا على ايجاد وتطوير حلول ابداعية.	
3. استبصار الصناعة (مجال العمل)		
1.	تقوم الشركة برصد واستكشاف الاتجاهات الناشئة في مجالها من خلال عملية منهجية.	
2.	تطور الشركة سيناريوهات بديلة والتي تمثل اما تهديدات او فرص.	
4. المستهلك / الزبون في مركز الاهتمام		
1.	تُبقي الشركة زبائنها (الحاليين والمحتملين) كجزء لا يتجزأ من عملية التخطيط الابداعي.	

2. تسعى الشركة لتحديد وتلبية احتياجات زبائنها (الحاليين والمحتملين) بشكل مستمر.	
5. التكنولوجيات الأساسية والكفاءات	
1. تدرك الشركة بوضوح اختصاصاتها الاساسية.	
2. تستطيع الشركة ان تحدد الصلة بين اهدافها الاستراتيجية طويلة الاجل وبين الاستراتيجيات التكنولوجية قصيرة ومتوسطة الاجل.	
3. تستطيع الشركة ان تحدد الصلة بين اهدافها الاستراتيجية طويلة الاجل وبين استثمارات البحث والتطوير قصيرة ومتوسطة الاجل.	
4. تستكشف الشركة طرق جديدة لتزيد الكفاءات الموجودة لديها.	
6. الجاهزية الثقافية	
1. تشجع البيئة الداخلية بالشركة العقليات المبتكِرة.	
2. تشجع البيئة الداخلية بالشركة التعاون وروح الفريق.	
3. يعتبر اسلوب صناعة القرار في الشركة أسلوبا شاملا.	
4. يوجد استعداد لدى الشركة لتقبل التغيير وجاهزية دائمة للعمل.	
7. الجاهزية التركيبية والعملياتية	
1. توجد لدى الشركة الجاهزية لتطوير العمليات التشغيلية المناسبة.	
2. توجد لدى الشركة الجاهزية لتطوير الهياكل الوظيفية المناسبة.	
3. تُخصص الشركة الطواقم الكافية لدعم المبادرات والابتكارات ذات الاولوية العالية.	
4. تُخصص الشركة التمويل اللازم لدعم المبادرات والابتكارات ذات الاولوية العالية.	
8. تنفيذ منضبط	
1. تُظهر الشركة وباستمرار القدرة على خلق تأثير قابل للقياس في مجال عملها.	
2. تتخذ الشركة نهج منضبط في تنفيذ التفكير الاستراتيجي.	
9. أهداف ومقاييس الابداع	
1. يوجد لدى الشركة أهداف ومقاييس تتعلق بالابداع (على سبيل المثال: "**س**٪ من العائدات يجب أن تأتي من المنتجات / الخدمات التي أدخلت خلال الاعوام **ص** الماضية").	
10. القدرة على الابداع المستدام	
1. تستغل الشركة الوقت لتتعلم من جهودها الابداعية السابقة.	
2. تلتزم الشركة ببناء ثقافة قائمة على الابتكار.	
3. تلتزم الشركة بتأسيس مجموعة من المنهجيات التي تركز على الابداع والابتكار.	

نهاية الاستبيان... شكراً لكم

Appendix E: Final Questionnaire in English

Part One: General Information:

******Please put out the signal (√) in front of the correct answer***

First: Personal Information

1. Age
□ Less than 25 □ 25 to less than 30 □ 30 to less than 40 □ 40 to less than 50 □ 50 Years and more.

2. Gender
□ Male □ Female

3. Educational Attainment
□ Secondary or less □ Diploma □ Bachelor □ Master □ PhD

4. Field of Specialization
□Engineering (Computer/ Telecom) □IT □ Commerce/ Business Administration □ Other, Specify_____

5. Total years of Experience
□ Less than 3 years □ 3- less than 6 years □ 6-less than 10 years □ 10 years and more

6. Years of Experience in current position
□ Less than 3 years □ 3- less than 6 years □ 6-less than 10 years □ 10 years and more

Second: Company Information

1. Company Age
□ Less than 5 □ 5 to less than 10 □ 10 to less than 15 □ 15 Years and more

2. Number of employees
□ Less than 10 □ 10 to less than 20 □ 20 to less than 40 □ 40 to less than 60 □ 60 to less than 80 □ 80 to less than 100 □ 100 and more

Part Two: Success Factors of SISP:

*Please indicate your agreement/disagreement with the following statements by writing a number from 1 to 10. (*10*= agree strongly and* 1 *= disagree strongly, while 5 or 6 = neutral).*

Item	Mark
1. Top management support	
1. Top management sets the overall direction of IS Planning.	
2. Top management participates actively in SISP.	
3. Top management assigns and sits in IS steering committee meetings.	
4. Top management helps in resolving problems encountered by the steering committee of SISP.	
5. Top management provides the necessary resources (manpower & budget) for SISP process.	
6. Top management follows up the preparation and implementation of SISP.	
7. Top management educates employees about the importance of SISP.	
2. Clear-cut corporate plan	
1. The strategic plan of the organization defines the role IT should play.	
2. The organization has a defined scope of the IS planning process.	
3. The scope of SISP is limited to real business needs.	
4. There is a strong linkage between Organization's corporate objectives and its IS objectives.	
5. There is a good fit between corporate strategic plan and the IS plan.	
6. IS planners deconstruct a business enterprise into processes and determine if they are adequately supported by the existing systems.	
7. IS Planners understand the organization's culture and goals.	
8. IS systems which don't align with business needs are upgraded or replaced.	
3. Good user-IS relationships	
1. There is a good communication between IS staff and employees (users).	
2. The framework for the effective user-IS relationships starts with top management.	
3. There is a formally appointed liaison officer whose task is to link the IS department with other departments.	
4. Top management takes the lead in bridging the gap between business and IS staff.	
5. Users in organization are educated about the role and potential of IT.	
6. There is a good partnership between business and IT staff.	
7. Users are made to feel part of the change brought about by IS planning.	
4. Qualified personnel	
1. The Organization relies on a pool of sufficiently qualified IS personnel.	
2. The Organization uses outside experts in preparing its IS plans.	
3. The Organization uses inside experts to prepare IS plans because they are familiar with company culture and objectives.	
4. Software/hardware vendors are important elements in IS planning.	
5. The organization provides training for employees in order to improve their	

capabilities in IT.	
5. Anticipating likely changes in IT	
1. The organization identifies new technologies in the field of Information Systems and be proactive to it.	
2. The infrastructure and IS environment in the Organization are flexible so that they can support any IT developments.	
3. IS planners depend on vendors to keep them informed of new advances in IT.	
4. New innovative products by other vendors of the Organization are taken in consideration.	
5. IS planners identify new technologies and assimilate it into the organization.	
6. The organization encourages employees to keep up with what's new in IS.	
7. The company provides sufficient budget for research and development in the field of information technology.	
6. Clear, concise and formal planning procedures	
1. There are formal IS planning procedures for the process of IS planning.	
2. The Organization has a clear and concise IS planning procedure that divides the IS Planning process into distinct stages.	
3. IS planning is carried out systematically involving all major stakeholders.	
4. The organization prioritizes IS projects in terms of their strategic value.	
5. Procedure or Methodology used in IS planning in The Organization depends on the need of the organization.	
7. Free communication and commitment to change	
1. IS Planning affects people both within and outside the IS function in The Organization.	
2. IS planners keep people inside the organization informed of their actions and decisions.	
3. Top management in the organization works to change the perception that the IS department is an insulated department, far removed from the others.	
4. Top management encourages free communication inside the organization.	
5. Top management encourages commitment to change throughout the organization.	
6. Communication within the organization provides an effective way to identify suitable strategic IT applications.	
7. IS planners recognize that the success of the IS planning process relies ultimately on its understanding and acceptance by the people inside the organization.	

Part Three: Level of Strategic Innovation:

*Please indicate your agreement/disagreement with the following statements by writing a number from 1 to 10. (*10*= agree strongly and* 1 *= disagree strongly, while 5 or 6 = neutral).*

Item	Mark
1. Managed Innovation Process	
1. Organization's approach to strategy goes beyond traditional planning methods.	
2. Organization's approach to new product development goes beyond traditional planning methods.	
3. The organization takes an exploratory approach that focuses internally and externally as well.	
4. Organization's approach to strategy challenges the status quo and creatively inspires new thinking.	
2. Strategic Alignment	
1. Organization's Leadership supports (and actively drives) a collaborative culture.	
2. Top management encourages different departments working cross-functionally to identify and develop innovative solutions.	
3. Industry Foresight	
1. The organization has a systematic process for actively monitoring and exploring emerging trends	
2. The organization develops alternative scenarios that represent either threats or opportunities.	
4. Consumer/Customer Insight	
1. The organization directly involves consumers/customers (both existing and potential) as an integral part of the innovation process	
2. The organization seeks identifying and meeting its consumers/customers (both existing and potential) needs.	
5. Core Technologies and Competencies	
1. The organization clearly understands its core competencies.	
2. The organization has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term technology strategies.	
3. The organization has explicitly outlined the linkage between its long-term strategic goals and its short- and medium-term R&D investments.	
4. The organization actively explores new ways to extend beyond its existing competencies.	
6. Cultural Readiness	
1. The organization demonstrates an innovative mindset.	
2. The organization demonstrates a bias for collaboration and team work.	
3. The organization demonstrates an inclusive decision-making style.	
4. The organization demonstrates a willingness to embrace change, and a penchant for action.	
7. Process and Structural Readiness	
1. The organization has the readiness for developing appropriate operational processes.	
2. The organization has the readiness for developing appropriate functional structures.	
3. The organization allocates adequate staffing to high priority innovation	

initiatives.	
4. The organization allocates adequate funding to high priority innovation initiatives.	
8. Disciplined Implementation	
1. The organization consistently demonstrates its ability to create measurable business impact	
2. The organization takes a disciplined approach to the implementation of strategic thinking.	
9. Innovation Goals and Metrics	
1. The organization has established innovation-related goals and measures (for example: "X% of revenues must come from products/services introduced over the past Y years").	
10. Capacity for Sustainable Innovation	
1. The organization takes the time to learn from its previous innovation efforts.	
2. The organization is committed to deliberately building an innovation-based culture.	
3. The organization is instituting a set of innovation-focused methodologies.	